PHYL-UNDHU

NICK LAND

Phyl Undhu

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... even in the few seconds that had passed since his arrival at her side, he had seen a patch of illumination go out, a swathe of lights – a whole precinct or district – turn suddenly dark. The lights did not return; there was a ribbon of blackness cutting across Spearpoint that had previously been illuminated. And as he kept watching, another ribbon appeared below that one – the lights flickering on and off this time, as if some ancient, overstrained generator had just cut out and then restarted, before losing the battle against the darkness. It didn't end there, either. In seemingly disconnected parts of Spearpoint, squares and rectangles of darkness appeared – not just in Neon Heights but in the upper levels, taking out parts of Circuit City and even the angel spaces. The squares and rectangles pushed out fingers and filaments of blackness, joining disconnected areas, squeezing the visible light into narrow, harried motes and margins, as if the visible lights were people being herded into stifling pens by armies of dark enforcers. – Alastair Reynolds, ***Terminal World*** (p.101)

The Certainties are those matters, only, which if not held true, make of all holding true or false an insanity. … Of the Heavens, whether there be such or not, nothing is known. We are compelled to concur with the wisdom of the ancients, when they say of paradise 'it is the topic of fools'. … Of the 1023 Hells, we know, from adamant principle and thus with perfect confidence, of their times, the order of their times, and – descending from the order of their times – their dominant qualities, of their superior and inferior gods, of their connections and doors, and the angles of their doors, of their names and the numbers of their names, to the ninth degree, of their seals and sigils, of their torsions, of the cries they release and the cries they hold, of their populations as to numbers, of their maze-types, bonds, and hooks, of their weapons, of the tools of their weapons, and the calls of their weapons, and also many other things. – Tchukhzsca, the ***Certainties*** (prologue, i-iii)

All so shed. – Unattributable.

Phyl-Undhu

§00. Utter nullity. In the words of the ancient sages of ruined Ashenzohn, it was *the endlessness that ends in itself*. Dark silence beyond sleep and time, from whose oceanic immensities some bedraggled speck of attention – pulled out, and turned – still dazed at the precipitous lip, catches a glimmer, as if of some cryptic emergence from eclipse. Then a sound, crushed, stifled, broken into gasps. Something trying to scream …

§01. *Does thirteen billion years really seem like such a long time to you*? It was too late for that question. She was no longer in the place where it made sense. To forget was a shelter indistinguishable

from waking, on some paths, and manifestation of the outer gates had already been accomplished with excessive harshness. Now the rustle of a curtain, the *tic*, *tic*, *tic* of a wind-flustered twig on the window pane, relieved her from those hideous cosmic durations, which had pulverized all refuge until only raw exposure remained. What had been worse were the hatches, nested inside each other, as they scaled down out of the icy, intolerable void. Something that was like a wind, but was not a wind, blasting, sucking, tugging directly at the mind. She scarcely dared to hope that the world had closed again, so quietly. She rummaged through the corners of each though, suspiciously, searching for insidiously self-delusive designs. "Madness is no escape," she had told herself, or been told, *advised*, by a voice that held the keys to indescribable …

"Nightmares?"

"No," she mumbled the necessary lie, as her sleep had before. Even in their recession, the cruel subtleties impressed her still. The slow excruciation had masked itself cunningly, spinning a second, inaccessible sleep-gate from the fabric of dreams, then a third, perhaps more, each sealed with intricate puzzle-locks. Exact recollection fractured among fake awakenings. She had thought, for long ages, that the episodic impossibility of reaching beyond this Matrioshka labyrinth was the whole of her life. Crossings beyond crossings. Now the palpable menace had dissipated. Only its husk remained. Vague direness. *What are you inside*?

"Can't sleep?"

"Sorry." She shifted again. "Am I keeping you awake?"

"It's OK honey." Jack Turner's voice had already shrugged off its drowsiness like a dead snake skin. He re-angled a pillow to prop himself up against the head-board. "Something in particular that's bugging you?"

Alison sat up next to him, her body stiff with tension. "Suzy mainly, of course." She paused momentarily, "... and I guess some other stuff." Bad dreams, thick with traps and false dawns, had been recurrent recently – but she wasn't referring to that.

"So you think this Suzy problem is serious?"

"Don't you?" There was querulous edge to the response that she had failed to entirely suppress. *It wouldn't be Jack who had to deal with this*, she thought grumpily. Still, he was asking. That was good. She took his hand, squeezing it slightly.

"She seems OK to me ..." he mumbled.

"Oh, Jesus Jack! The school has set up some kind of exceptional meeting to discuss what's 'going on' with her. Does that sound 'OK' to you?"

"So, what is ...?" He trailed off. Neither of them had yet switched on a light. The darkness made their exchange seem spectrally insubstantial, oneiric. "You know what honey, if we're going to talk this over properly – and you're right, we should – it would be better to get up for a while. If we stay here it's just going to feel like insomnia." He was already swinging his legs out of bed,

reaching for his ridiculous tartan dressing gown. "A glass of wine would help me focus."

"Really?" She smiled, and began roughly mirroring his actions. "Wine? Now? At two in the morning? When we're both working tomorrow?" It was meant to sound light, but it didn't. Moonlight painted black webs over her face.

She scanned the dimness for her favorite night-dress, an over-sized tattered jumper that had once been maroon, but was now an odd shade of bruised gray. The left elbow was completely gone, but it was warm, the weight and scratchiness comforting. Locating the shadowy mound near the curtain, she hooked it towards her with one foot, and pulled it on. To give up on sleep like this was a relief. It was true.

§02. Jack had already fished a half-consumed bottle of Shiraz from the fridge by the time she reached the kitchen. She sat at their large time-scoured table and let him pour her a glass.

"I'm seeing Suzy's teacher tomorrow, straight after work," she said. "There's not much to discuss until then."

"Do you know what it's about?"

"'Frightening her classmates.' That's all I've been told."

"Frightening them?"

"That's all I've been told," she repeated, lengthening the leash on her irritation.

"OK, OK …" He held up his hands defensively. "It's just …"

"… absurd. Yes." She sighed. "I've been dealing with this for almost a week. By dinnertime tomorrow we'll know what it's all about."

"But it's keeping you up?" he persisted.

"Oh, I don't know Jack." It was her turn to throw up her hands, almost knocking her wine glass over. "It's not a rational thing."

"She'll be OK," he mused vaguely, swirling his unconsumed wine into a slow vortex, mind caught in the red swirl. "Although actually, since we're here, there is one Suzy-related matter that concerns me, a little."

"That stupid game," she predicted.

He looked up, surprised. "Yes … that's right."

"Feels like it ate our daughter sometimes, doesn't it?" A ghostly smile.

They'd never spoken about it before, as far as he could remember. Not even casually, in micro-fragments, or humorous allusions. It was odd – perhaps slightly sinister, for this prominent time-wedge, driven diagonally into their family, to have become so entirely unmentionable.

"The thing that's been bugging me is that we don't know anything about it. Driving home the other night, I tried to calculate how much time she's spent in there. A thousand hours? It can't be less than that. It's not that I want to go down the 'young people today!' road …"

"... but we know nothing at all about their lives." She was sure this completion of his sentence wouldn't count as an interruption. He'd let it hang half-way, long enough to offer an invitation. The pseudo-telepathy was a little marital solidarity on the cheap. They probably needed that right now. There was a roughness rolling in from somewhere. It was going to be hard. She shivered slightly.

He was tilted towards her attentively, and noticed. "Cold?"

"Metaphysically cold." She smiled weakly, but genuinely, to take the edge off the verbal chill. "You know that old TV thing: *Winter's coming*."

"Now you're being melodramatic," although he didn't really think so. "It won't seem like anything much, looking back."

§03. It was already winter, and the darkness was slow to ebb. Through the unveiled kitchen window they could see across the street, which was patchily illuminated by sparse suburban street lighting, cold bluish neon feeding shadows. A random speckling of warmer night lights dotted the houses opposite. Roofs were dusted with early snow, catching the luminosity of Earth's dead satellite, which hung, huge and low, in a purple-black sky. *Hunter's moon*, Jack thought, without great confidence. It was a term he knew only from fictions. Horror stories.

"And how about the 'other stuff'?" he asked, after a while.

So, he'd heard, and remembered. She was impressed. "Work oddness. I'm not sure if it's anything, really …" She no longer thought she wanted to return there.

"If it's keeping you awake, it has to be something …"

There was no escaping it. Perhaps it would be good to talk it over, although that now seemed unlikely. "There's a case … it's getting to me somehow. I don't know why. At least, I don't think I know." *Which wasn't true, or even a sustainable lie.*

"An especially creepy cult?"

"No, nothing like that. I mean, sure, it's creepy, in its own way …"

"And that way would be?"

"It's almost too – how should I put it? – too calm, too rational … too civilized … I'm sorry Jack, this is stupid, isn't it?"

He ignored the evasive self-deprecation. "So what's the belief-system?"

"Technically it's a Makharov Type-IX cosmo-deist inversion – fatalistic, pessimistic, apocalyptic … If I were a collector, this would be my prize specimen. It's near-perfect. Except …"

"… they're too nice." He'd been well-primed. That was exactly what it was – at least part of it.

She released an odd bubble of laughter, then shook her head, as if to clear it. "No coercion, no isolation, no real economic exaction, sure there's charismatic leadership but – here's the weirdest part – I met her."

"The leader?"

"Yes, in a coffee shop of all things. Stranger still, it was my client who insisted on it, introduced us. It was ethically … I didn't know what to think. I still don't. She was charming, polite, clearly highly-intelligent. My client obviously likes and respects her. It's nuts."

"So what's the problem?"

"He's scared."

"But I thought …"

"No, not of her, or the group. He's scared of the philosophy, of his own beliefs. There's nothing to stop him walking away, but he can't walk away from himself. He wants not to have thought certain things."

"Can you help with that?" he asked, skeptically.

Smart Jack, she thought, *you get it*. She shrugged. "I've tried to explain what the therapy can do, and what it can't, that the only difficulties we're able to deal with are those of dependency. He even seems to understand it. If there was someone else he could turn to, he probably would. But where does he go? A priest of some kind would be the obvious answer, but the only sense in which he's religious is *this* one, and it's the source of the problem. He can't philosophize his way out – that's why he came to me in the first place." She scowled in frustration. "You'd be at least as useful to him as I am, more I'd guess – your interests are closer to the topic."

"What is the topic?"

"I'm finding it hard to help him," she said obliquely. "No, it's worse than that. I dig him deeper into it."

"Into what?" It took a struggle to keep the frustration out of his voice.

"'The End is a Thing, and an Intelligence,' that's what they say. 'And we can converse with it'."

"This … 'thing' has a name?"

The color drained from her face, suddenly.

"Allie?" He reached across the table to grasp her hand. It was clammy, abnormally cold. "Allie, what the hell is it?"

She jolted back, as if from somewhere else. The ghastly parody of a smile struggled onto her lips. "It's nothing. I'm sure it's nothing. Really."

"For Christ's sake Allie, you're scaring me to death. What is it?"

"The name … Oh Jack, I know it sounds stupid, but I'm having a *really bad* time with the name."

"This is about Suzy too, somehow, isn't it?" He had no idea how he knew.

She nodded, minutely, brokenly. "Don't laugh Jack, but the connection is Suzy's ridiculous 'invisible friend'."

"'Phil?'" he recalled immediately. It was a phase that had lasted longer than the time since its end.

"Yes, it started with that hideous stuffed octopus, remember? Bob and Sally bought it for her – which I'll never forgive them for – and she refused to let us throw it out, even after it had

disintegrated into shreds. It got absolutely disgusting, and then when I put it in the washing machine it clogged up the filter …" She paused unnaturally, frozen, as if a wave of entrancement had passed through her, and then resumed, without any sign she had noticed the interruption. "… those gray-green threads of some indescribable material. Then Suzy would be mad. 'Why was I trying to ruin her cottopos? What did I have against Phil?' You remember?"

"Sure. It went on for years."

"And then, when we finally got the filthy …" (zone out) "… cottopos into the trash, it was still 'I don't believe you, Phil told me that's nonsense. Phil knows much more about that than you do. Phil tells me different. Phil tells me secrets …'" Something had happened to her voice that chilled him to the bone marrow.

"Yes."

"Why did she call him 'Phil'?" Her gaze was black ice.

"I don't …"

"Why? Why that name? It came out of nowhere, didn't it?"

He struggled through mental fog towards some clear recollection. Nothing came. "It was just a random thing I guess."

"'Random'."

"What's this about, Allie? I'm not understanding at all what this is about."

"Maybe it's nothing."

"I think we're way beyond that point."

She laid her hands flat on the table, took several deep breaths, started over. "Cult extraction therapy is a slow spiral inwards towards the central beliefs." Her voice had slowed too, stripped of inflection, as if she was reading from a manual. It was a distancing tactic. This was how she put difficult material in order. He remembered her sounding this way, as she enumerated the options available to them, when Suzy had broken her ankle on the slopes of Mount Lovell, six hours hiking distance from civilization. It had been OK that time, in the end. "It's important not to start with matters of doctrine, or get to them too quickly. The cult experience has to be cognitively neutralized. You start with the social dynamics, then the rituals. The beliefs come last. So it wasn't until we were deep into the process that I first heard it."

"It being …?"

"The name. Suzy's 'invisible friend' name. The intonation was identical, like an old recording being played back, just for me. Jack, it was horrible. It sounded the same – *exactly* the same – but I heard it differently, as if this time I was hearing what it truly said, what it was. I've never been so …" Inertia would have led her to say 'scared', but she stopped, because that wasn't it. It had been much closer to grief, although it wasn't that either. It had been the impossibility of continuing to live, suddenly understood, but in a way that was not at all personal. Everything was impossible – that's what it meant. Everything was over. There was a revolution, slow and implacable, like the wheeling of the galaxies, in which

even the incandescence of the stars was a concentration of coldness. "Icy necessity," she murmured, reluctantly remembering. "It was the name of fate. This isn't making any sense, is it?" Her eyes were clogged with emptiness. Where reflection should have been, there was only the soul-scouring vacuity of some abandoned, and then long-desolated hell.

§04. Some nights seem not to end, except inside themselves. They are filled with strange turns, leading to unwanted doors. Sleep is supposed to protect us from them.

Jack glanced at his watch, which wasn't there. Panicked now, by an obscurity far beyond his tolerance, he rushed into an imbecile buffoonery. The humiliation was pitched up into agony, even as it rolled out, but he was unable to stop himself: "Phil? Their ominous cosmic thing is called 'Phil'? You mean like 'Philip the Magnificent, Destroyer of Worlds'?"

Rising up, immediately behind the infantile giggle that then sought to emerge, was a dilating bubble of hysteria without obvious conclusion. Theories of cosmic expansion modeled it, mathematically. A dilation not *in*, but *of* space. Inflationary catastrophe so extreme it can be mistaken for the beginning of the universe. He still remembered, with sharp clarity, the moment – as a 15-year-old – when he had first truly understood that, grasped what it meant, what it said that space was, *right here*. Cosmology

had possessed him then. Now he locked the virtual explosion behind a rigid, broken grin.

Alison's expression was unforgiving. "No. I don't mean anything like that. *At all*," she said stonily.

Chastened, he swallowed the last of his wine, poured some more. This moment of idiocy would haunt him for the rest of his life, he realized sourly. The need for psychological insulation was now an explicit, urgent demand. "So it's another 'Phil'."

Her gaze softened, to become strangely pitying, as her voice dropped almost to a whisper. "You're still thinking it all upside down."

He had begun to see something that he didn't want to see, to a terrifying level of resolution. It was still no more than the shadow of a thought, but its contours were acutely defined. *Upside down*, yes. There was a cognitive rotation, he could sense it, precisely, like the dial on a safe. If twisted around, it would free the thought to come forth, from out of the dark, and it would bring the dark with it. It would *unquestionably* be too much to bear. *She has to carry this for now*, he thought, or they would both be finished. At the lucid acknowledgement of this despicable cowardice, self-loathing blossomed like a tropical flower, vivid in its captivating accusation. Still, it had to be her. It simply had to. She had passed already over the threshold. That was unmistakable. There would be no point in him joining her there – not yet. If he did, there would

be nothing further he could do. His mind writhed in a hasty search for some more ego-compatible rationalization. That was good. The futile puzzle was a distraction. It was something else. Perhaps she even understood that *she couldn't let him know*.

"So what do you think it means?" he pretended to ask.

"Don't ask me that!" It wasn't quite a shriek, but something was welling up that wanted to be one. If there could be nothing but noise, without sense, it would help. She wasn't prepared to drown alone, sinking endlessly into some ocean trench of truth, to spare a rescuer who would never arrive in time, for anyone. Instead, she clung to his disintegrating raft of evasion, hands gripping the side of the table, veins and tendons outlined like hieroglyphics of stress.

"You don't get to hog the shelter of self-deception all to yourself, goddammit!"

He forgot, sometimes, that she was a psychologist by training and inclination.

They stared at each other, more distanced than they had ever been, and yet, simultaneously, complicit in a deliberate – desperate – unknowing. The congealing lie, nestled between them, was scarcely less real than a second child.

§05. The client had understood. That was a discovery beyond all plausible uncertainty now. Wherever they were being drawn,

it was a place that he had been – from which he could not exit. He had reached out to Alison in a desperate search for untruth. She had been useless to him, and merely professional, not knowing enough to be serious. Now, it had come to this.

He had called it 'TotAL' and conversationally, of course, simply 'Total' – the Temple of the Absolute Limitation – it had other names, but that was the one they had used during counselling. This compact semiotic bundle was packed with occult clues, which she could have followed if doctrine and cultural genealogy had been the subject of interest, but they weren't. She wasn't trying to be serious about this strange little cult, but rather the opposite, for what had seemed perfectly good reasons. It had been all-too successful at being taken seriously, certainly as far as her client was concerned, or so it had seemed to her then. What had been needed, then, was something else.

"As in 'totalitarian?'" she had asked him. It had been intended as a light joke, and not all as a manipulative, psycho-social prompt. That had been clear from her tone – she'd thoughtlessly assumed – but he had reacted with awkward distress. She felt bad about it at once. Before he had even finished stammering a denial she hushed him with an apology. Looking back, that clumsy jest came to seem like a moment of disastrous breakage.

The key to the therapy, in her experience, had always been bound to humor. There was a critical point of rupture, at which the client was induced to laugh at the cult's mental chains. As the

bonds of belief came to seem ridiculous, they fell away. That was the way out. It was a reliable route – the only one she knew – but on this occasion it had been lost recoverably, sacrificed to a failed witticism. The comedy was over. Somewhere off-stage, TotAL thickened, condensed in vindication. The therapeutic process was still underway, as a vacant formality, but it was limping nowhere.

For the client (we can call him 'Simon', though this was not – of course – his real name) it was as if the final door had been slammed shut. He slumped back in his chair, struggling to dull the barbs of reproach, which were in any case rendered irrelevant by the ceremony of unconditional surrender, to the oppression of his own intelligence. No assistance would ever come. How could he ever have imagined it might?

"The Temple asks nothing of me," he said softly. "It told me something, when I asked it to. That's all."

"It told you communication with the end of the universe was possible?"

"That sounds absurd – because it's badly formulated."

"So, formulate it better." This was no longer extraction therapy, or anything like it. This was contagion.

"We exist within a stream of signs – a torrent. Information flows through us, in overwhelming abundance, as a deluge. It is screened, sieved, filtered, and edited, trimmed, narrativized, delegated to mental sub-systems, dumped, so as not to drown us.

Yet, if we can calm ourselves enough to think, it is clear that this flood of signal can have only one possible source: reality."

"Reality?"

"So what is reality? That's the question, yes? Don't you see? *It's telling you*. It's The Flood. It's total revelation. Every second, it pours in, through hundreds – thousands – of channels. 'Don't ask for a sign' – I'm quoting Phyllis now. Perhaps I have been for a while. 'You have a billion signs a minute that you don't want. You're already in The Flood.'"

"Phyllis," Alison muttered, with an irrepressible hint of bitterness. "Of course."

"You've read Ovid?"

Alison strained to remember, to catch the reference. Nothing came.

"The abandoned princess. 'I gave many gifts, many that I was given …' but you, false Demophon, fled. You blocked it out, forgot, shielded yourself with distance. *You left me*."

"You're confusing me."

"Yes, it's too much. I'm sorry." He closed his eyes, resigned. "You didn't ask for this."

§06. Alison Turner disliked Clifford Bagley within seconds of meeting him. It was not his fault, she recognized. Unfortunately,

his manner recalled someone else, someone for whom she had felt intense aversion, and had in fact quite obsessively hated. The personal characteristics in question were not intrinsically loathsome (this admission took some psychological effort). They were no worse than neutral, although not less than pitiable. Signs of a barely-controlled anguish. A neurotic agitation of the hands. A darting, shiftiness of expression. A chronic apologetic cringe that veiled – like orbital dust – a hidden core of unfathomable, gravity-locked rage. It was an absolute defeatedness, perversely triumphant, and held at bay by some tortured parody of normality – as a kind of undeath. They had called … *the previous man* 'Zombie'. A nervous adolescent giggle threatened to revive at the thought. Poor Mr. Bagley was probably a 'Zombie' too. It bonded the two men across time and space, with the absolute necessity due some shared Platonic essence.

The other man, whose name still escaped her – had also been a teacher – and the man she had most detested during the entire course of her life to date. This was not based upon anything specific that he had done. It was a response to his overall attitude, which had been directed – she felt at the time – towards her absolute psychological annihilation. There was a way he had of speaking to her, seemingly without the slightest hint of deliberate malignancy, which reduced her immediately to nothing. That, at least, was the story she had told herself throughout two decades of adult life, but now – for no reason she could quickly identify –

she felt this narrative slipping. There had been something else. Something more intrinsically obscure. Perhaps something *much worse*.

None of this need have been relevant, were it not for the fact that civil interaction with Mr. Bagley was going to be important. He was Suzy's class teacher, and quite probably a perfectly unobjectionable individual. The topic of discussion, however, was going to be fraught with tension. Bagley's mysterious inner unity with his vile precursor would be a further hurdle to be cleared.

Yet it began well. He removed his smart watch and placed it carefully in the desk drawer. The action was a little fussy, but it was undoubtedly considerate. Alison wondered vaguely whether he was following an institutional procedure, or a private one. In either case, she appreciated it.

In her own work, it was even more important to project focus. She had no watch at all, but only a micro-tablet. It was flexible enough to run her life through, yet easily stowed in her shoulder-bag. Susie would roll her eyes at the archaism, on occasions …

"… sorry, you were saying?" *Focus*. Could he have said that? No, that was from her own chain of thinking. But he had said something, hadn't he?

"Are you alright Ms. Turner?" His concern was understandable. The dark rings under her eyes had to be brutal.

"I'm not at all sure what this is about," she stated flatly, determined to keep the defensiveness from her voice. "This is an unusual meeting, isn't it?"

"Yes. Yes it is," he concurred, over-eagerly. "It's about Susan, of course." He had picked up a pencil, and was twisting it awkwardly between his fingers. He was not enjoying this. "It's that, well – she's upsetting the other children," he blurted out. "I'm hoping you can help me understand why."

For a few seconds Alison was actually stunned. She was surprised and then – because her surprise made no real sense – thrown into confusion by her own unpreparedness. She had relapsed somehow. What had she been expecting, after all? Wasn't it exactly this? *Worse than this*? She could no longer remember. "Upsetting?" she managed finally. "Upsetting them how?"

"It's actually quite complicated," Bagley replied, quickly, assertion and apology messily tangled in his tone. "If it wasn't, we could have perhaps done this over the phone." His face underwent a subtle convulsion, as it lurched towards a smile and then – after urgent consideration – retreated back towards sympathetic *gravitas*.

"She's only eleven." It was pointless, clumsy fencing. As if she had some use for time.

"To be blunt, that is exactly the point. Eleven-year-old kids don't talk about these type of things – not in my experience, at least."

"What 'type of things'? I'm sorry, but this is all in code. I really have no idea what you're talking about."

He ran his hands through his thinning hair and sighed. "Actually, I'm not really sure. I've tried to get Susan to explain her ideas to me, many times now, but they can be hard to follow. She's frighteningly bright," he winced noticeably at the adjective. "Her mind is fast and – I'd say – perhaps, *daring*, venturing into areas few want to follow, or *can* follow. What little I understand, it mostly comes from her classmates, and they're usually confused, often upset. Sometimes very upset." Without warning, he changed tack. "I have to ask: Do you talk about religion much at home? I know that your work ..."

She interrupted rudely, her fury barely contained. "My work has nothing to do with it!" Then, with a forced, brittle calm: "I'm very careful to insulate Susan from my work. I'd never dream of mentioning my cases to her. She's a child – and I do understand what that means. My case files never enter the house. My computer is securely locked. Nothing I come across at work has anything to do with this. Nothing."

"But she knows what you do?"

"Why are you asking this?"

Her naked hostility had driven him even further into cryptic allusion. "Some of the – ah – themes of her thinking, they're – how can I put this? – most unlikely to have reached her any other way. Your daughter has some very complicated, very unusual ideas of a religious nature. We had to suspect …"

"I think I know where she got these 'ideas'," Alison said quietly, defeated by a flash of insight. The answer to this horrible riddle loomed into view, clad in the unmistakable livery of parental neglect. Guilt had now crystallized and become unprojectable. "She's very deeply involved in a game."

"A game …" Bagley ruminated aloud, relieved by the ebb of tension, and struggling to convince himself of the new storyline – but it was impossible. "It's an – um – interesting suggestion." Then, with evident reluctance: "The trouble is, the system of belief we're talking about seems to be far too sophisticated for that."

"You still haven't told me very much," Alison replied meekly, all fight gone.

"'Everything starts from the end.'"

"I beg your pardon." The words had escaped too soon. The last thing she wanted was an explanation, but Bagley was already providing one.

"It's something Suzy said. Not to me directly, but to the other children. Often, it seems. And there was a poem she wrote, with that title, for Mr. Foster, her English teacher. It wouldn't have been a problem, of course, not at all, if it wasn't part of something

more. Something she was able to communicate to her classmates with – um – consequences."

He's scared too, Alison thought, to block out a wave of other thoughts, which could be made to wait. There were too many connections to cope with now. They would have to be shelved, dealt with later, somewhere else. Jack would have to share this.

"There was an attempted suicide," Bagley continued, cheeks reddening, eyes wandering desperately. He couldn't look at her.

"Christ!"

"The child survived," he added quickly, and unnecessarily. "No lasting physical damage, but I'm sure you understand. The parents are incensed. Legal action has been threatened. It's not the sort of thing the school can simply overlook. …"

Her mind recoiled from situation, stumbling backwards into the hideous *other*, Bagley's prototype – what had been his name? The question gnawed at her distractingly. She had always known it (surely?), and then – suddenly – it was there: *Filkin*. George Filkin (but the forename added nothing).

"Are you feeling alright Mrs. Turner?"

"I'm so sorry, but I feel sick," she said, stinging pin-pricks swirling across her temples like particles of ice. "Is there a bathroom?" He pointed, and she ran, hand cupped over her mouth, down the corridor to the pink and blue gender signage. She skidded inside, reaching the bowl just in time. It smelt of

disinfectant primarily, then of children, before anything worse. She vomited everything out in three increasingly-painful spasms. The cool of the porcelain against her cheek offered an iota of compensatory bliss. Consciousness receded into dot pattern and a continuous whine, then slithered back, clogged with self-disgust. *Now he'll think I'm on drugs*, she thought miserably.

§07. So, the game was on. They waited until Suzy disappeared upstairs to bed, then squatted down together beside the terminal. The neat set of little matt black boxes, leads, and attachments was such a familiar feature of the room that it had long edited itself out of attention, but they noticed it now. It was an unintelligible alien incursion (and a door).

"There's some material I printed off the Web," Alison said. "It's kind of what you'd expect, except – when you dig a little deeper – it's not."

She extracted a thick sheaf of A4 pages from her bag. The archaic substantiality was comforting, in its determinacy and finitude. Some passages had been marked up in red ball-point pen.

"The word that comes up a lot is 'creative'," she continued. "After a while, I began to wonder what that really meant. It's complicated – and not only for the obvious reasons."

"Maybe we should start with 'the obvious reasons'," said Jack, uncertainly.

"There's no time. Actually, I don't think there's time for any of this. We just need to hack in there and find out what's going on."

"Hack in?" His doubts had redoubled. "That might not be easy."

"I broke into her watch," Alison said, pride and shame reciprocally neutralized.

"You did?"

"I watched her needling the password in, and could see it was a nine-letter code. Eventually I found it, written down in a notebook, badly hidden in a paragraph of scrambled text. 'Phylsword'."

"What?"

She wrote it down for him.

"Phyl sword?"

"I'd thought 'Phyl's word', but who knows?"

"And in the phone, find anything?" He tried to keep the tone non-judgmental.

"No. Nothing," she admitted. "Not even sure what I was looking for. Something to do with the damn game. Keys."

He activated the console. It took only a second to power-up. "We'll need a username and a password. Two nine-figure codes this time, by the look of it." He was pretending to think it was possible, for no real reason, but the act was evidently unconvincing.

"You don't believe we can do this, do you?" Weariness outweighed accusation.

"Eighteen bytes of security isn't a joke."

"Maybe she uses 'Phyl's word' again?"

"Then it's just 72 bits. You know that story about grains of rice and a chessboard?"

She ignored the reference. "'Suzy turns.'"

He shrugged, tried it. "'Username and password do not match.' This isn't the way, Allie. There are over one hundred *trillion* combinations – and that's just the alphanumerics. We don't have a serious method for shrinking the search space. Suzy's old enough, and smart enough, to keep secrets from us. Three fails in a row, and I expect it to lock us out, while flagging an attempted intrusion. We're wasting our time."

The message got through, then, and Alison doubled-back. "The chessboard thing …" she mumbled. "Yes, I get it. Suzy's brain has escaped. Years ago, actually. So, what's the next move?"

"Suzy opens it up for us, what else could it be?"

"You think she would?"

"Better than one-in-a-trillion chance, and we're still ahead."

It was nearly midnight. Steps, coming down the stairs. Guiltily, they re-positioned themselves, away from the machine. Suzy opened the door.

"What on earth are you doing up young lady?" Alison asked, activating a deeply-grooved formula.

"Weird dream," Suzy replied, her voice slurred with tiredness. "I wanted a drink of milk." It wasn't clear whether she was even awake.

As Alison steered their daughter into the kitchen, Jack lay back on the rug, closing his eyes. Walls of closed code spooled down across self-stimulating retinas, in random flurries. Winter was whispering outside.

§08. There wasn't much milk in the fridge. Order had drifted. Alison estimated the contents of the carton dubiously. Maybe somebody could re-stock before breakfast in the morning. She poured what there was into a glass, and handed it to Suzy.

"This dream?"

"It wasn't a nightmare."

"Really?" Alison countered skeptically, recalling her own recent lies. She noticed her daughter's thin pajamas, and bare feet. "You must be freezing." Jack had left one of his heavy winter jumpers dangling messily over the back of a chair, thoughtlessly abandoned, an arm inside out. "Here, put this on." She should have been rushing Suzy back to bed, but there were things that she wanted to know.

"It was more of a puzzle," Suzy volunteered. "Umm, what's the word – *abstract*. There was a shape, but it didn't make sense, as if it didn't fit into space, and it had a direction, a tilt, I don't know

how. You were in it, too, and Dad, trying to work something out. There were so many signs, buried inside each other. It raced my brain too fast, and I woke up."

"OK honey." She couldn't help hoping for more.

Suzy finished her milk and started to get up, then sat down again. "Something's going to happen, isn't it?"

"Is it?" Alison had already switched. "I don't know, something's always happening." She didn't want this conversation anymore. "It's really late. You've got school tomorrow."

"You know the weirdest part of the dream, Mom?"

Of course she didn't. (*Please let that be true.*) She shook her head, but the negations were tripping over each other, getting confused.

"There was a stage, close to the end, that somehow wasn't my dream at all. It got tangled up with this house, or another, like it in a way, but not quite, with corridors, and halls, and connections. I remember thinking, *I've wandered into Mom and Dad's room.* Even there, in the dream, I knew what it was saying. I'd taken some strange turnings, in the dark, and crossed into a dream you were supposed to be having. Not that it was yours, either, not really. It was its own place. I thought *Dad's good at geometry, he'll be able to explain it*, but you'd been there more, somehow, so you'd be particularly familiar. Then I was awake, without noticing, and felt thirsty. It wasn't really scary, but it was odd."

"Honestly Suzy, you're the most peculiar little person sometimes." She didn't know whether to laugh, weep, or shudder. She looked at her watch, theatrically. "We definitely have to get you to bed."

§09. Galaxies are not scarce. There are at least one hundred billion in the universe, with each containing roughly one hundred billion stars. That's 10,000,000,000,000,000,000,000 – or ten sextillion – stars altogether, perhaps many more. It's an unintelligible number, and then an awe-striking one – and then a horror story.

This non-fictional horror story is very special. It has a name that owes nothing to the flights of literary imagination. This is science's own, soberly-delineated nightmare. It is called The Great Filter.

As scientifically-disciplined inquisitiveness pulls life apart into chemistry, its mysteries are alchemized into an astounding normality. Life requires nothing very extraordinary for its existence. Its known replicator molecules are not devoid of intricacy, but they are simple enough for earth's dominant mammals to have reconstructed, while still unaided by thinking machines. Sheer cosmic noise, of which there is of course plenty, suffices as a source of variation. The natural selection mechanism that sifts through trillions of copies, extracting and propagating the most functional variants, is a pure – and indeed utterly

inescapable – automatism. Chemical stock is abundant, suitable thermic conditions common. Nothing obvious stands in life's way. According to the ever-more insistent suggestion of mainstream scientific intelligence, the universe should be teeming. Really, it should.

All available *general* evidence points to a galaxy pulsing with life. The *specific* evidence, therefore, is chilling. For none is to be found, beyond our own, solitary case.

What do we know about the Great Filter, really? We have a name for it, if only a provisional one, which says *something*. It has acknowledged existence. In the terms of the philosophers, it is *rigidly designated*. Something there is, of which we know nothing, except that it efficiently exterminates all advanced civilizations, at a cosmic scale.

We're still around – for now, Turner thought, settling back into the absurdly comfortable chair Alex offered favored guests to his office.

"Drink?"

Turner pulled-up the time on his watch – it wasn't yet 4pm. He raised an eyebrow.

"Don't be such a goddamned Puritan Jack, it's been a long day. For you too, I can see. It will grease the synapses." He was already pouring one for himself, with exaggerated appreciation. "It's a

truly excellent single malt … My God, perhaps the universe does have a purpose."

"Go on then, you degenerate," Turner laughed. "As if I can say 'no' to that."

Alex reached under his desk for a second tumbler. "Cigar?"

"I thought that was strictly against the rules."

"Special dispensation, didn't you know? Got it written into the employment contract."

"Anyway, no, thanks, nicotine jolts me around too much."

"Mind if I do?" Alex asked, with apparent sincerity, opening a matt-silver cylinder to release what had to be north of thirty bucks-worth of hand-rolled fragrant tobacco leaf.

"Of course not."

"So you're back on the Filter nonsense?"

"Only as a minor side-line."

"Still."

"Curious whether there'd been any developments I've missed. All the fiddly standard candle calibration stuff has been distracting me from the speculative cosmology discussion recently."

"'Developments' – holy shit – you're serious, aren't you? I think I might have a link to some website you'd find helpful, tracking down the connections between unusual levels of yeti activity and Area-51 …" A phone trilled. "Sorry Jack, I have to take this. Don't go anywhere." He spun his chair around to face the landscaped

campus panorama of autumnal copses and lakeside lawns, encapsulating himself in a wireless bubble, as he clicked down the mic from his headset. "Yes, this is Professor Scott. Yes, I've been expecting your call. We're good to go. A couple of proposed budget revisions – they've already been forwarded to you. The deadline's OK, as long as we get everything we need. Great. That's great. Sure, let's do it. Great. Yes. Superb. Catch you at the convention, Brian. Gotta go." *Click*.

With the Deep Space Systems Nanowave Modulator contract confirmed, he swiveled back, undistracted, thread unbroken. "... but it's worse than that, isn't it Jack? It's philosophy. I mean, holy fucking shit, didn't the last beating you took from me do you any good at all?"

"The Great Filter is empirically inferred," Turner insisted stubbornly. "It's not even conceptually-dependent upon the Anthropic Principle."

"Woooh boy." Scott was enjoying himself. "'Empirically inferred.' I love that. Truly and woodily. Trouble is Jack, when you run through all the catastrophe scenarios, you find that none of them hang together. AI catastrophe doesn't work – you know that. Killer machines of any kind are just more hidden aliens. Simulation traps can't complete the probability calculus, and in fact nothing plausible can. Get to the end of the list and 'poof' – no space yetis."

Turner was stunned into silence. His mouth actually fell open, idiotically. After a few seconds, however, Scott's smile of complacent triumph provoked him into a response.

"Sorry Alex, but that's absurd," he mumbled, almost inaudibly, unsure how to restore his argumentative bearings. What would even count as a logical step forward at this point? If Scott could rest his mind so comfortably upon 'reasoning' from mere utilitarian convenience, were there any real limits on his thinking at all? "Why would we even *begin* to believe that we can comprehensively enumerate how things could go bad?"

It was too late. For Scott, the exchange was already over. Turner could see the disengagement happening, Scott's gaze wandering, a sluggish indifference creeping into his voice. "You're telling me we should be terrified of something we can't even imagine?"

"'Terrified' I don't know, but basically, yes, that's exactly what I'm telling you."

"Come on Jack, listen to yourself. That isn't science. I don't know what it is … statistical heebie-jeebies of some kind. It reminds me of that demented 'Doomsday Argument'. Another monster conjured up out of the unknown by unconstrained probabilistic reasoning. At a certain point, you just have to be sensible – and by that I mean minimally sane, like *there are no fucking space yetis* sane. If it's unthinkable, it's not a problem, right? It's no

more than a bad dream. You shake the philosophical cobwebs out of your head and get over it. …"

It had been a pleasure, as always.

§10. Alison glanced at her watch. There were several specks in the queue. She delegated them to the embedded secretary with a few habit-honed needle taps. It was Friday night, getting late, and professional responsibilities were on hold. All that mattered now was the time.

"Where the hell is Suzy," she grumbled irritably. "It's past ten."

"Carol warned us about the length of the movie," Jack replied, soothingly. "It could be another 15 minutes." Then, seizing the opportunity: "So, this Filkin guy, 'the zombie', what happened to him?"

"He killed himself," she replied flatly. "I didn't care at all, either way. It was an ending."

"So you've no idea why?"

"Come on, Jack!" she almost laughed. "'No idea?' You know how many lunatic 'ideas' get served up to me every day? I'm up to my nostrils in ideas. *Ideas* are fucking pollution. There are always ideas."

"OK, OK." He was smiling too. "Seemed like a loose end in the story somehow. I guess not."

She had wandered over to the window, reflection buried in the dark. Sporadic snow-muffled traffic noises drifted in. The stars were like ice crystals, as the poets had always said. The stilled year waited for nothing in particular. Occasional flakes meandered downwards, to expire upon the glass.

"It's madness, isn't it?" she said. "To think that his name and the source of his death could have any connection? I'd never imagined insanity could be so cold."

"There's chance," he tried. "You were gambling on worse than trillion-to-one odds yesterday."

"That's because I didn't understand."

The door buzzed.

Once Suzy was inside, Carol thanked, the door closed, the car's Doppler-shifted vanishing complete, negotiations proceeded rapidly. There was only one item on the agenda, and Suzy grasped it almost immediately.

"Go in without me, and you'll be dead in ten minutes. Go in with my carrier and you'll trash it. So I'd have to guide you."

"Would you?" Alison asked, before Jack could complicate the proposal.

Suzy's ambivalence was palpable – a jagged oscillation between compliance and resistance. "This isn't going to go away, is it?" she asked eventually.

"No, it isn't," Alison replied firmly.

Suzy had been protected from the details of the school consultation, but she understood enough to realize that it hadn't gone well. "I don't know what you expect," she said, with a hint of petulance.

"What should we expect?"

"Darkness. Pain," more calmly factual than Gothic.

"Well, if that's to be the discovery, maybe you shouldn't be spending half your life in there." The soliton of controlled anger was not well hidden.

Jack placed his hand on Alison's knee, the message economically conveyed: *we need her cooperation*. Suzy noticed, and pretended not to.

"You tried to break in, didn't you?"

"Yes." Unhesitatingly. It didn't really matter how she knew, or what she thought of it. If it appeared as a sign of clumsy desperation, that might help.

"Alright then."

"You'll do it?"

"I said 'alright'."

"When?"

She re-angled her wrist to glance at the time. "Username 'Suzyxwvut'," she said. "Password 'phylundhu'."

§11. Looking around in this strange space, Jack realized just how *definite* his quickly-extinguished expectations had been. The word 'game' had been bound in his mind to tacit convictions that already seemed laughably false. Through sheer inertia – a "failure to update" he would once have said earnestly – he'd been prepared for an environment that announced its artificiality through limited resolution. Even were it not discernibly pixelated, it would be somehow cartoonish, and sensually shallow. The discrepancy was shocking. He concentrated his attention on the gray horizon, struggling to collapse its depth into the graininess of electronic illusion. Clouds coiled heavily around distant peaks. A storm was coming.

His genre assumptions had been no less inaccurate. Suzy had never spoken about it much, she'd simply disappeared into it. There had been packaging at one stage, though, and perhaps some kind of illustrated booklet. From those, an impression had assembled itself automatically, grafted onto a mnemonic backdrop of legends, fairytales, and childhood fantasies. He had anticipated an elaborate stage-set, designed for chivalric romance.

It wasn't like that. Everything was wrong, or almost everything – scales, styles, atmospherics … In its expanses, as in its details, there seemed too much of it to be *for* anything. There was a jagged harshness here that no story could soften.

Neither Allie nor Suzy looked much like themselves, but he recognized both of them immediately. Age differences had been

compressed, but only moderately. They were still two parents, with their child. The adjustments to their features were subtler still, although weatherings, hardenings, and scarrings now suggested a familiarity with extremes of endurance and casual cruelty. Alison had the posture and expression of a stone-cold killer. Compared to Suzy she was a picture of humanitarian sensitivity.

He and Alison were dressed in utilitarian black clothing, frayed and stained, designed for walking through rugged terrain, and well-adapted to the climate. Various clips, belts, and pouches were conveniently provided for collecting stuff. It was a game, after all.

Suzy's attire echoed there's stylistically, but it had been modified by long years of adaptation. Her utility slots were neatly cluttered with items and implements of obscure provenance and purpose, systematically scavenged from various distant corners of this cryptic world. The predominant ashy black coloration of her clothing was disrupted by irregular stripes of vivid green. They were wasp markings, evidently. She had become venomous enough here to post a warning.

They stood on a ridge, high enough to be cool, but the landscape around and beneath them was densely jungled, steamy and voracious. Tropical vegetation gnawed at a fractured terrain of slippages and chasms. Scattered throughout the scene were

untidy jumbles of human habitation, bursting from the tangled foliage like ulcerations.

"What do you think?"

"It's so ..." The thought had not completed itself, but it was heading through 'grim' and 'melancholic' towards 'crushingly oppressive' or worse.

"It's beautiful, isn't it?" Suzy anticipated with eager inaccuracy. "Bigger than the world, somehow."

Something massive towered behind them. At first he mistook it for a mountain, perhaps an extinct volcano. It tapered to a summit lost among clouds. Only gradually did the realization dawn that this was an artificial structure. His mind reeled at the impossibility. Then he remembered where he was.

"Ashenzohn," Suzy said. "It's old."

"Old?" He didn't want this. His mind recoiled, exhausted and shuddering. Already psychologically bruised from spatial super-saturation, he had not begun to consider the time-dimension, also opening into shattering expanses. Of course, it was going to have been sensational, but somehow he had not been ready for it, and it was all far too much. He shut his eyes, but the sucking vastness still impinged. Where a headache should have been, there was instead a kind of tumbling outwards, a vacuuming away of self.

The colossal mound, however, screwed monstrously into the sullen sky, was something he understood. *It had to be.* That, now, was inescapably obvious.

"I know what it is," he said. "It's a space elevator, or what's left of one. The ruins of a terrestrial base station."

Suzy was looking at him fixedly, her face illuminated by something close to awe. "How did you know?"

"A story." He struggled for recollection. "It was by a writer called – let me think – yes, *Reynolds*. Very similar structure, a massive spiral. Time itself decayed – regressed – as you descended it. The setting was more arid, if I'm remembering right." He was rambling, and stopped himself. "Books," he teased. "Did you ever come across them?"

"There's a library," she retorted acidly. "A big one. Maybe you'd like to see it?"

"Where?"

She pointed along the spur, to the root where it fused into the mega-structure. A large domed edifice nestled there, pale gray against the cluttered, inky backdrop of the spike.

"The lighter building?"

She nodded.

"How far is that?" The scales were still disconcerting.

She pursed her lips, pondering. "We could probably get there in an hour, I suppose."

"An hour!" Alison grumbled.

"You have to stop fretting about time, Mom," Suzy scolded gently. "It doesn't work like that here."

"You mean ...?" Jack began, as an unseen door began to creak open, on the far-side of his mind.

"Don't ask!" Alison interjected fiercely.

He wasn't going to saunter into that hurricane, especially trusting his curiosity as little as he currently did. Alison had more than earned her present position as the warden of secrets. If she thought there was something they didn't want to meet, lurking at the end of that question, it would be madness to second-guess her. Still ... Mental gears had begun to grind, and they refused to return to rest. Some kind of time dilation, which had to mean they were thinking *in the machine*, accelerated beyond themselves.

It inclined to an alternative interpretation of the Reynolds structure, whose time gyres were differentiated by refinements of matter. Could the levels of the cyclopean screw correspond to echelons of duration? Great mechanical twists of inwardness? It was odd to be noticing it only now. Why had he never made the connection before? After Susie had consumed the instruction manual – she had been absorbed in it for weeks, as if lost in a religious tract of unfathomable significance – it had been left lying around, crumpled, the inner pages coming unstapled, and he had definitely registered it, deliberately, consciously attentive. The structure was depicted starkly, its spiral groove unambiguously marked, yet it had somehow eluded him.

"This might be it, you know," he thought aloud.

"What might be what?" Alison asked.

"It's one of the Filter theories. Absorption into simulations. Cultures swirling out of the universe like dirty water down a plug. Derealization vortices."

§12. Alison was not seeing a virtual mega-construct from a science fiction novel, but rather the Tower of Babel. The elder Marten van Valckenborch's painting of 1595 had captured it best, with its hint of spiral torsion amid doomed industry, as the incarnated project ascended into darkness. The Dutch Renaissance spoke to her in a way she had never seriously reflected upon, and a large print of this work – a personal favorite – graced the wall of her office. Perhaps she had hoped that its depiction of extravagant enterprise, twisted about an occult core of invisible insanity as it wound upwards to collapse, would find echoes among the tortured systems-builders with whom she professionally conversed, brought onto her client list by comparably ruinous cravings for the absolute. It had taken a while before she realized that no small number of her clients were soaking up the image as keenly as she had done, and were finding something very different in it.

'Simon' had been lucidly forthcoming on the subject, as on so many other things. He had made no attempt to disguise his fascination. On their very first meeting, when she ushered him to the comfortable chair that served as an analytical or therapeutic

couch, he had strayed instead over to the wall where the picture hung. Not only was the work familiar to him, he had made very deliberate efforts to see the original in Dresden, cataloguing the experience as among the most memorable of his life. When he saw it, though, then and now, he also saw through it.

The name he gave it said everything. It was simply the 'Evil Tower'.

"'Evil'?" she had queried, skeptically. It struck her as an atypically vulgar description.

"Don't get me wrong," he added quickly. "It isn't a judgment *about* the phenomenon, it's the judgment inherent *in* the phenomenon. Nemesis. The demonstrated judgment. Second-guessing the lesson is the sin."

Now she was here, in the shadow of the broken tower, its eclipsing vastness palpable upon her skin. Alison wriggled out of her backpack and rummaged through it. There wasn't much inside. A few pieces of clothing, an aluminum water bottle, some light, simple tools. The most substantial object was a crude blade, attached securely to the side of the pack by criss-crossed straps. It was a kind of machete, not especially sharp, its cutting edge besmirched with brown stains. "Am I really going to need this?" she muttered disgustedly, under her breath.

"Unlikely," Suzy replied.

"Thank goodness for small mercies."

"Or thank something else, for this." Suzy extracted a compact matt-black weapon from a fold in her tunic, and held it up for them to admire.

"Can I look at that?" Jack asked, his voice stretched wolfishly.

"Sure," Suzy said, scanning their immediate environment with trained efficiency, then handing the killing tool over.

It was the size of a small machine-pistol, almost square, with a flattened barrel culminating in a horizontal slit.

"The ammunition is some sort of disc?" he asked. "Like a coin?"

"These," Suzy answered, pulling out a spare magazine and popping the first round carefully into her palm. "They're sharp," she warned.

Jack took it from her gingerly, to inspect. It was something like a circular razor blade, roughly two centimeters in diameter, thickened slightly towards the center to add mass, but even there under a millimeter in depth – the shape of a miniature buzz-saw galaxy. There was no doubting it was an enemy of flesh. He handed it back nervously. The fact his daughter was confidently wielding this thing was horrifying, but a little less horrifying than his rapid acceptance of its necessity.

The weapon now made as much sense as it was going to, without dismantling it in a laboratory. The propulsion mechanism was a solid-state unit, completely sealed. When a magazines was clicked into the side of the device a tiny blue light winked on, indicating the marriage of a scythe-disc with the projector field.

"This thing is preposterously advanced."

"Jack!" Alison gasped, appalled by his admiration.

She still wasn't seeing what the existence of a device like this said about the world.

§13. The path wasn't quite a road. It would have been difficult to drive a vehicle along it, even a horse-drawn cart, and there were no signs that anybody had ever tried. It dropped down below the spur-crest, to a level roughly ten meters off the ridge, and the same distance again above the dense jungle line.

There were signs of furtive activity in the vicinity of the nearest hab-cluster.

"Pralh," Suzy said, before anyone had a chance to ask. "More than a few. But it shouldn't be a problem. They're not likely to be organized."

"So what do we do?"

"Skirt the cluster. Go around them. Ignore them if we can. If they get in the way, kill them."

"Suzy!"

"That's the game, Mom. Get a grip."

"So, what are these 'Pralh'?" Jack asked.

"I'll explain later," Suzy replied impatiently. "You can assume they're NPCs. War-fodder. The only thing that matters to us now is getting past them."

"We can do that?"

"No problem." She patted the micro-scythe weapon. "They're primitives."

Alison couldn't restrain herself any longer. "If I'd known what this disgusting game was all about, I'd have …" she exploded, inconclusively.

"But you didn't, did you mom?" Suzy countered. Then, more gently: "No one knew. It grew itself. You think I wanted it to be like this? I'd hoped to marry a handsome prince, or something."

"So why keep coming back?"

"It seems … important."

"How could it possibly be 'important'?" Alison shot back, reflexively, but she wasn't even convincing herself. There was too much of it for it to be anything other than important. "People struggle for centuries to shovel this garbage out of the world, and it just ends up here."

Suzy wasn't in the mood for this fight. She indulged her mother with a 'do you even read the news?' look, and said nothing.

Jack wasn't so ready to let go. "It's almost as if there's some kind of deep conservation law."

"Can you please shut up Jack, this is all just a game to you … Oh, fuck!" She was close to tears.

"Try not to lower the tone Mom," Suzy pitched in cruelly.

"This is such fascist *bullshit*."

"Listen Mom," Suzy said, her voice firm far beyond her years. "If you don't cut this out, *totally*, you *will* get us killed."

The words worked, sorcerously. Alison froze, shifted inwardly, passing through an instantaneous metamorphosis. "OK," she said.

"You have to toughen *the fuck* up," Suzy added, with brutal redundancy.

Alison merely nodded.

"Don't, Suzy," Jack said softly. It was at once the least he could say, and the most. Deplorable as his daughter's words had been, they were no less *right*. This place made its own demands, and Suzy was incontestably their channel.

He tried to absorb what he was seeing. From their position, high up on the escarpment, the panorama was stunning – or strategic. Emerging through the vegetative chaos, flecks of ramshackle settlement, and epic devastation, there were patterns. The jungle was rippled, in circles, and rings, its distribution of forms and colors betraying a history of semi-continuous, traumatic bombardment, attested by the occasional ochre wounds of raw impact craters. The dappling of overgrown splashes radiated into the habitation shanties – which thickened upon the slopes, and towards the great spike, like an inverted diffusion wave – buckling and blackening their edges. It was as if they were clutching at the skirts of a towering dark mother, even as she repulsed their affections with storms of hell-hail.

The hab-thickets closest to the Ashenzohn uplift told a deeper and subtler story. It took a geologist's eyes – for which Jack's were but a poor approximation – to comprehend it thoroughly. Patterns

of sedimentation, folding, subsidence, and weathering composed a graphic record, whose themes were only partially abraded into the noise of interminable detail. The main theme, in particular, was starkly striking. Each successive layer of encrusting development was more friable, chaotic, and primitive than the last.

"It's falling, isn't it?"

"The Empyre?"

"Is that what it is? What it calls itself?"

"It's an old name."

An inaudible hum slithered into his thoughts from the scenes of dereliction, the remains of a song long decayed into silence, descended from some attenuated Ancient Order of Existence that had clambered up to the brink of the celestial plane, stretched fractionally further, then burnt, tumbled …

"Do you think it understands itself?" he asked, no longer having any idea what she might know.

"Still a little, maybe …" she mused. "At a certain point, when you know everything will be lost, you begin to take memory very seriously – but by then it's too late. Mostly, people here are just struggling to survive. That gets more difficult every year."

The game would be like that, he realized suddenly. It was ingenious, in a way. Every level was more difficult than the last. The trend smoothed out, to some extent, into a descent path. The further you panned out, the more it would appear as a continuous down-slope. Harshening resource constraints, environmental

degradation, food shortages, social disintegration, lashing the population remnants into a tightening circuit of cruelty, as the walls of the world closed in.

They had reached the outskirts of continuous urban structure. As detail exploded into view, form melted. War damage and improvised construction bled into each, coagulating into an indissociable complex of creative destruction. Remnants of ancient masonry supported the ramshackle mass, scorched, raked, and pitted by paused furies.

"How can there still be such sophisticated munitions?" Jack asked, probing the shrapnel-pitted stone with his fingers.

"Magic."

"Oh, c'mon Suzy," he said, disappointed.

"No, I'm serious," she insisted. "It's Clark, the 'any sufficiently advanced technology' quote everyone knows, but you have to run it backwards. Military capabilities that once made sense relapse into obscure affliction as the world decays."

"Whose 'capabilities'?"

She said nothing, but simply pointed towards the cloud-shrouded upper reaches of the spike. The seething vapor mass was wrapped about the unseen pinnacle as if glued to it, internally agitated by a turmoil of green phosphorescence, ceaselessly racked by the bound discharges of an artificial electric storm.

"What is that?"

"Phyl-Undhu," she said, as if nothing could be more obvious. "It's what we're all looking for, isn't it?"

§14. The outer slum-belt of Ashenzohn wasn't a nice place, even slightly. It had been deeply ravaged, repeatedly, until its most basic substance was indistinguishable from devastation. The words 'holocaust of freedom' were nagging at Jack's mind, for no reason he could understand, until he consciously registered the graffiti that had to have subliminally directed his thoughts. ***Cthulhu is calling*** was scrawled on the wall in some thick black substance, and then, a little further down, ***the future belongs to the squid***. It seemed obvious that 'squid' mostly meant 'not us' – not *at all* us – but the invocation of a Lovecraftian Outer God was messy. How could it possibly have arrived here, unless through narrative corruption? He began to argue the point, in a stumbling fashion, but Suzy shrugged it off. "Perhaps we share an Outside."

"Do they even have cephalopods here?" he asked, switching tack with agility.

"Sure, in the swamps, nasty ones."

"Tentacle gods?"

"You can imagine a world without tentacle gods?" she laughed. "Get real."

Perhaps he would have laughed too, were it not for the shifting shadows of potential assassins, preying upon the ungraspable

outer-edge of vision. Alison was lost in a daze, somewhere far beyond fear. He tried to interpose his body mass between hers and the glimpsed menace. The effect was a drunken, looping locomotion without real practical purpose. Suzy, calmly attentive, knew what she was doing, and progressed steadily towards their destination, with a potential to deliver massive violence – instantiated by the scythe-gun – accompanying her like an utterly reliable friend.

Nothing came at them out of the fate-shredded slums. A sullen populace, proud only of its verminous resilience, avoided the streets as if they were death zones.

"They mostly emerge at night," Suzy muttered.

Those trapped outside, in the grim half-light, consisted predominantly of nervous peddlers, or beggars spat out from the wars, bodies obscenely re-sculpted by amputations and flesh-melting burns. Dead looks were exchanged, but all interaction bled away into apathy, leaving only a residue of dull hostility and revulsion.

Where the warrens fell away before the firmer architecture of the superior levels, maze-like alleys converged upon widening avenues. A desolate public plaza marked the zone of transition. Along its longest, gently curving wall there was stretched an enormous bas-relief. Rippling out from the center of the carvings, in waves, were crowds of people, mashed horribly into each other, crushed and trampled, as they fled in shrieking panic from the

incomprehensibly lethal influence of star-headed monsters. The alien beings had been depicted as malignant giants – perhaps 15 meters tall – clustered together in the center of the scene. The hint of a whorl ran through them. Jack suspected they were approximately anthropomorphized stellar masses. All about them, humanoid bodies lay scattered in tangled heaps. The killing mechanism was unclear.

"Jesus Christ!" he muttered.

"Not exactly," Susie replied, smiling crookedly.

He recognized the grim joke from an old horror movie – *Hellraiser*? Had Susie been exposed to stuff like that already? It was an absurd question, of course. They were inside something right now that was almost certainly worse – not only vividly and viscerally threatening, but far darker in its ultimate implication. They would find their way out of this, eventually (he still believed), but there would be no ending in that. The ending was here – and close now. It was the thing they were approaching.

§15. As the incline steepened, the city opened out. The fetid warrens of the scurf population lay far below, their smashed subhuman detritus gradually replaced by the first tentative signs of civil life. Security personnel filtered the pedestrian traffic flows, checking appearance and documentation, systematically reproducing the Stump's vertical social stratification with

unconcealed intent. Suzy evidently possessed some ostentatious credentials invisible to her parents, because she was able to lead her little party up through the check-points without the slightest suggestion of even transient interference. Unable to settle upon an alternative explanation, Jack began to suspect that her venom stripes were a key.

The approach to the library was a passage slicing through rings of crystallized ritual. The Stump's semi-public information depositary, it emerged, was a religious nexus, from which institutionalized mysticism radiated outwards, in rapidly decaying ripples. A fog of heady, alien incense thickened in the streets. Glyph-spattered ceremonial gateways punctuated the road-side, beyond which black-robed devotees prostrated themselves before the occult evocations of their shadow-wrapped shrines. From the surrounding temples came the sounds of chanting, maddening in its rhythmic elusiveness, as the cults ceaselessly re-habituated themselves to subtly-variegated pneumatizations of the archaic Anglossic Cycle: *Ibdhjad*, *Aj*, *Baa*, *Caf*, *Dia*, *Eja*, *Fam*, *God*, *Hagg*, *Idu*, *Jaeo*, *Kul*, *Los*, *Mona*, *Nemo*, *Omana*, *Padbbha*, *Qumn*, *Rakht*, *Sigol*, *Tactt*, *Umneo*, *Vfisz*, *Wumno*, *Xikkth*, *Yodtta*, *Ziltth*. With each gyre of their world's descent, the secret of language receded ever deeper into itself.

The library building itself was far more severely war-gnawed than its distant impression had indicated. Its great dome – so

smoothly coherent to remote contemplation – had been largely skeletalized by dilapidation and missile damage, its integrity preserved solely by the density of its structural mesh. The massive outer walls had been furiously raked and pierced, in successive, overlapping waves, but the deepest scars were now time-smoothed into patterns of irregular undulation, cross-cut by mold-softened fissures, and complicated by twisting cavities.

The entrance was a vast triple gate, externally flanked by giant statues that had been eroded down to a vague anthropomorphy. One face had been entirely sheared away, at an angle that expressed pure violence in the medium of plane geometry. The second face had been centrally gored and blackened by the impact of some super-heated kinetic object, and now gaped in mute ruin, as if consumed by an artificial mouth designed only to scream.

Security was intense. The triple-screen of heavily-armed guards was supported by ancient red-eyed spider-robots and patched-up ex-military drones. Suzy ignored them, except for occasional scarcely-perceptible nods of acknowledgment to a few senior offices, in order to concentrate upon bundling her intimidated parents through the gates, and into the building beyond.

"How are you doing that?" Alison asked her.

"Passing through, you mean? I did a job for them – a seriously big job. More than one, actually."

"Giving you open-ended security clearance?"

Before Suzy could answer, the exchange was interrupted by the formalities of their reception. On the other side of the inner door, a welcoming party was already waiting, its extravagant display of invitation edging into genuflection. The tallest and least cowed of the hosts – effortlessly exuding seniority – stepped forward, smiling broadly, to grasp Suzy by the hand.

"This is the Librarian," Suzy said in introduction, his name properly sublimed without residue into the extraordinary dignity of his office, and then, reciprocally: "My parents, Jack and Alison, they're accompanying me on a research trip to learn about the history of Ashenzohn."

As expected, the library was a technological mausoleum. Its core radiated into tremendous alcoves, housing a chronologically-ordered collection, whose arc traversed dead computers and media formats, on an apparently distant asymptote towards accessible signs. Countless yottabytes of extinct data had been folded down out of fossil codes, often multiple times, degraded in increments through technical simplifications, re-writings, and ever cruder interpretations, leaving only confused registry numbers and cryptic inscriptions behind. As they followed a curving path along the inner-edge of the immense cultural tomb, their occasional words and soft footfalls echoing through its uncommunicative halls, the librarian joined his hands before his face in a gesture of prayer. "Only Undhu remains," he intoned, with quiet solemnity.

"You speak English," Alison said, surprised by this fact for the first time.

The librarian merely stared at her blankly, mouth slightly open, the confused whirring of his brain comically transparent.

"She means Anglossic," Suzy interjected, a little disloyally. "It was taught oddly, where they come from."

They had turned into a smaller, elongated chamber which seemed to be an active work-space. A few clerks worked with silent diligence at the catalog arrays.

"Now," said the librarian, carefully lifting down a thin metal box from the shelf, "this is something very special." The case was silver, tarnished to blackness, the lid engraved with an ornate Ouroboros. He placed it gently on the desk, and opened it. Inside was a pamphlet of conspicuous antiquity, so thickly wrapped in layer upon aged-layer of protective sheathing that the cover text was quite illegible. The underlying illustration, however, had been less definitively obscured. Among the blurred glyphs, the figure of a steep mound hauled itself up from distant sepia depths. It was less an image than a faint suggestion, but it was unmistakable.

"This is the oldest artifact in this world," the librarian mumbled reverently. "It's the key to our world, *The Book of Ashenzohn*. It slips away from us, by some imperceptible iota, each time we look at it. We say that Yinkko, the Goddess of Dust, reads it over our shoulders. Not that anyone reads it now. It's a forbidden book. Not because of what it says, but because of what

it is. Because of its fragility, its microcosmic recapitulation of disintegration. Naturally, the Inner Council have full authority to inspect whatever they like, but they never come here …" he chuckled oddly "… they have *far* too much to do. So, practically speaking, I am the only person permitted to touch this box, let alone open it, and I have not done so for close to a Scale-8 Yera."

"That's about 18 years," Suzy explained. Then, to the librarian: "My parents are visiting us, from a distant land. They don't understand our calendar." She turned back to them. "It's calculated in 'Yeras' – triadic orders of magnitude. It has to have been a Scale-5 Yera – 8 months or so – before I was able to wrap my head around it."

"I've no idea what you're talking about," Alison muttered.

After only a few moments of searching, Suzy identified a calendric ledger, and brought it back to the desk. The book was new enough to be still functional – and in fact, still in use, its final entries incomplete – but its chafed leather cover announced its considerable age. The text, mostly strings of numbers, had been meticulously written by hand. Jack fell upon it, and as its nature became apparent, his avidity tested the limits of etiquette.

"I need some time with this," he demanded, in an urgent whisper.

"How much time?"

He ignored the question, lost in dates. "Suzy, I know you probably can't help me with this, but when it says here 'Scale-20

Yera of Falling Ashenzohn', that's …" he paused, quickly re-checking "… over nine million years."

"You're supposed to be looking at this," she said, impatiently. "Don't you recognize it?"

He reluctantly returned his attention to the ancient pamphlet, his mind hesitating in uncertainty, before adhering to it suddenly, in shock.

"Isn't it …" Alison began.

The missing signs were unreadable, but the spacing sufficed to jog recollection. They had last seen this same instruction manual only days before, although they had been days of another kind. The cover had carried an audio credit to the *beaconsfield sound hub*, fashionably de-capitalized. On this copy, the first 14 letters, and also the last, had been deleted by time.

Only after the librarian left, among profuse apologies for the inflexibility of his duties, could the discovery be frankly discussed.

"The idiots," Jack said. It emerged as a horrible strangled laugh.

Suzy stared at him quizzically.

"Oh, you know, that ludicrous voguish lower-case convention. It's inexplicable. How would you even begin …?"

"You think it's an accident?" It was not a request for clarification, but something far more abrasive.

Of course, he was about to begin, but his words faltered before the sharpened iron of her incredulity. *Was it really possible to think*

anything else? Even asking the question was some kind of general cognitive slippage, tripping into an abyss of collapsing time-dimensionality. "You're suggesting …?"

"You're nowhere near taking this place seriously yet, are you Dad?" she interrupted, re-emerging tween condescension softened by amusement. "You don't think anything that happens here matters at all. 'It's a game' – or probably 'Gosh! This is an extremely complicated game' – as if that explains anything. Aren't you seeing anything? People live here. People die here. People die *to* here."

"Suzy!" Alison admonished. "You have to stop this. It's sheer craziness."

"*I* have to stop this? Look around you. Go on, dig, explore. I've spent most of my life here, and I've not even begun to scratch the surface. It's the world. You know what's really crazy …?"

"Enough!"

For several seconds it seemed as if this maximally-escalated assertion of maternal authority was not going to suffice, that it would be called out, and serve only as the mark of a terrible, final break. Suzy glowered, face flushed, as if teetering upon the brink of irrevocable rebellion. Then, with a slow exhalation, some peculiar, visible calm washed back through her. It was a sinister tranquility, alien and void-soaked, the very last thing – normally – to which any parent would surrender a child, but too many lines had already been crossed for that to be a consideration now. Alison

wrapped her daughter in her arms, hugging her with raw desperation. Suzy relaxed, pliably, into the embrace. It might have been touching, had there been anything to touch.

"We need you honey. We're strangers here. You have to help us. *Please*."

Alison half-turned to Jack, and took his hand. They both knew, if the worst had happened, there wasn't anything he could have done. It was OK. It had to be OK, because there was nothing else.

"It's alright Mom," Suzy said. "We're almost done now." They were all going under.

§16. After a while, heading inwards, there were only books. Packed shelves as dead as storage racks receded into gloom-smudged vanishing points, bearing astronomical magnitudes of unwanted signs. It was dust condensed into suggestion. There was more history here than could ever be used, for anything.

"This is the story," Suzy began. "The little I understand of it. I'm going to assume nothing that reaches beyond a Scale-15 Yera can be taken as reliable. It serves only as a prologue."

"That's ..." Jack was still completing the calculation "... almost 40,000 years."

"Does that seem a long time?" Suzy asked, her features washed-out into a trance. "The tale goes much further back, before the Aeon of Ashenzohn, when Asttro-Babal reigned, and men mingled freely with gods at the edge of Heaven. It was a time of miracles,

when sickness and mortality were unknown. Delight, learning, and work were indistinct. There was only a distant memory of war. Then the Scission came, to end the primordial intercourse of being. Not far above the High Temple, a lesser star appeared. The Whurrld was divided from Heaven, in an instant, and irremediably. The Great Tower of Asttro-Babal was broken, to be thenceforth known as 'Ashenzohn' – *the reaching-out that touches nothing*. That which had embraced the stars was now only a curse cast down upon the planet. Sublime disaster struck. Of the multitudes who survived, the children of gods and men were called the Geniers, and were few. Those of men alone were called the Pralh, and were many. The differences among the Pralh were only those between men, or between men and beasts, but the differences among the Geniers were closer to those between men and gods. In the shadow of the burnt summit, the highest of the Geniers began to think themselves gods, and so to behave as devils. The wounded Whurrld was tortured anew by their magnificent mischief. Casualties beyond numbering drifted into dunes like desert sand. There was no glory that was not also a billion screams, and all-enveloping ruin was the only true God. By the beginning of the Second Aeon of Ashenzohn, the Geniers had sunk so deeply into the crumbling embers of their infamies that even the highest among them was scarcely more than a man – but the Pralh, too, had fallen very far …"

Had that been the Old Myth from the start? Jack wondered. He could just about see it as something the game designers might have built in. It would fit neatly on the back of a box. *Or was it something new – a spontaneous innovation – sculpted by the decay of a world? The 'Whurrld'?* He said nothing. Even the silence seemed to echo here. Shadows were layered like abandoned cobwebs, as if space itself was peeling away into an absent wind. The intermittent plinking of distant drips reached them from an unseen corridor. Alison was scarcely with them anymore, beyond perfunctory indications of physical acknowledgement. He had no idea where she was. And Suzy …

Your daughter has been immersed in madness for a time beyond your reckoning, for over year as you confusedly calculate it. For a while now, your wife, too, has been trawling the catatonic depths of the psychotic abyss. So, Jack – how are you feeling? It wasn't quite an alien voice. He recognized its silvery tone as a liminal duplication of his own thoughts, dislodged, and drifting away. If not a naked lie, it came from the place of lies, despite its superficial plausibility. He closed his soul. *Killing children with greenness*, the non-voice sang in an alien key. That had to be about Suzy, woundingly, so he ignored it too.

Suzy had settled into an unearthly rhythm, her breathing and enunciation cycling with perfect smoothness, her tone inhumanly steady, wiped clean. "The Pralh, once partners of the Geniers, then – later – playthings, bundles of spare parts, prey, slaves … had been

shaped by the Order beyond time to pull everything down. With the half-gods repeatedly re-decimated, broken, and insane, the Aeon of the Pralh – since known as 'history' – had now come, stretched forward to the final horizon of all distance, bounded only by the terminal annihilation of things. And so the Pralh-Wars began, a cascade of blood balanced only by flame, driving the turbular descent of the Whurrld, infolding through phases of catabolic collapse. The remnants of each gyre were fuel for the incendiary chaos of the next. For those who fall, the past is great, and the greatest of all is found at the beginning. So it was with the revolutionary wars of the Pralh …"

At the dawn of the new Aeon, Ja'aab had arisen as the first Holy Leader of the Pralh. The very notion was a distilled blasphemy. There were those – and not only among the superior echelons – who found it simply incredible. Speculative genealogies of various kinds were devised, attributing to Ja'aab some decisive influence of Genier blood, whether through the maternal or paternal line, or even – since the miscegenative hypothesis was scarcely less abominable than the idea of a divinized Pralh – from both. These tales of Ja'aab's sex-slaved Genier mother, of his lofty bastardry, or of his abduction as an infant changeling, were fitting signs of a breakage in the order of the world. The wave now came from below.

When the Over-God raised Ja'aab up, it was said, he had been instantly emptied of all cruelty, and all pity. *The revolution was made*

in perfect sanity, klaii Ja'aab. Whatever conformed to necessity was upheld. Whatever opposed it was obliterated. The work was done, without prejudice, or qualm. "If every second Pralh has to die, in order for those left to become the instrument assigned to me, the holocaust will have been a blessing unto the people," Ja'aab said. These words were carved upon monuments throughout the Pralh hinterland, as if they were the lyrics of paternal love. In actuality, consolidation of the Universal Pralh Nation required no greater severity than a general decimation. Less than a billion had to die, to lay the foundations for popular discipline. Henceforth, there would be assent. The Pralh had been re-made for war. *Klaii Ja'aab.*

Into the Hecatomb of Ja'aab the nation was poured, rejoicing in the greatness of its destiny. … "The Ja'aab Wars were probably nothing but a mashed-up legend," Suzy said, extracting herself in pieces from the narrative mesmerism. "A succession of five tsunami waves crashing against the stump of Asttro-Babal, savagery and slaughter beyond calculation. There's even a version – which none of the histories take seriously – that has Ja'aab himself reaching the inner sanctum of Phyl-Undhu, and dying heroically there. Elevated pointlessness, followed by a Scale-15 Yera of chaotic killing and uninhibited atrocity. As you can see, Ashenzohn is still here, and the Pralh certainly aren't running it. Out in the green

hell, rag-tag guerrilla groups still sew 'UPN' flashes onto their pajamas, so it has to have been something, I guess."

"And the Geniers?" Jack asked.

"There are still a few," Suzy said. "You've met some. Mostly, though, they're gone. Without wanting to get too loopy about it, there's a story that they fell into a game."

"So who are we, here?" he mused aloud.

"'Ghost people' they say, but that doesn't really tell us anything. Mutant Geniers, maybe."

"What's the point of a story that doesn't tell you who you are?" It seemed like a gaping design glitch.

"Perhaps puzzles matter to people – a lot. Even more than existence, in the end. Everybody who enters Ashenzohn – every *stranger* – thinks they're going to discover their ultimate identity here, eventually. At least, they suspect it. There are hints. That's what keeps them coming back."

"To find out, you mean?"

"No. I mean, *to not know*."

"Suspense?"

"The end of suspense," she said. "Understood outside in – the unusual way."

§17. Assume the myths are all lies. Still, the spire of Ashenzohn *had* to be broken. Whatever the depths of its cloud burial, certain elementary facts could not be concealed from the mental probes of inference. If there had ever been an Asttro-Babal – an Old Empyre – nurturing what were now-inconceivable cosmic intimacies, it manifestly died, long ago. Ashenzohn no longer connected to an orbital twin. The celestial path was stumped. The name of the city said as much, if Suzy's sources were to be credited. If they were not, it mattered little. Ruin had befallen it, and any Temple of Phyl-Undhu, situated at its uppermost limit, could only have been blasted and charred beyond all imagination in the catastrophe. Final breakage was the demonstrated reality – the entire movement of the Whurrld. The late poets, even in the gathering senescence of the times, with each of their words caged in the desiccated formulas of an all-enveloping decadence, had still caught a vivid glimpse of the dread contour. *O scorched and shattered Ashenzohn! Your highest and holiest place – if it exists in truth at all – is no more than a blackened relic of doomed aspiration. Our damned Way-Stump, rooted in an ocean of blood, crowned with an abolished heaven.*

§18. The insane ghost of a slain lesser god remains a terrible thing. Its residual power, dreadfully irresistible for mortals of the degraded echelons, manifests through a delicate devastation of

time. It happens too soon. Messages multiply, so far advanced, they appear as if from nowhere. The Anglossic intercourse has begun, contactless, or immaculate, before that makes any sense, even within itself. Once the stream has broadened, it has already been an elaborately developed conversation, long underway, protective of its origins, endlessly absorbing of all memory.

Try to fold the madness inwards and it turns immediately into laughter. That's a hectic path, never wisely taken. It circles back upon itself, forever, as its rhythms close. Everyone understands that truly *bad* jokes really aren't funny, in the slightest, but are rather the absolute antithesis of redemption. Stillness before all, therefore, even in the vortex. Calm acceptance is needed to follow the Old Road …

"… that's roughly what she told me," Alison said, as if sharing the words of an extended, winding, intricately braided interior polylogue – which she wasn't, remotely.

Beyond the library's inner collection halls, on the route into the core of Ashenzohn, stretched the ancient access tunnel that was known as the Gallery of Time. It began as historical reconstruction, frieze-coded into the dimming substance, but after some few kilometers of penetration there was only quasi-diamondoid black mirror that tolerated no reflection, running green electric dot-patterns upon the pure annihilation of light.

"Don't touch me," Alison added, more fully returning, without the slightest hint of crossness. "You don't know where I've been."

It had to be a joke, but it didn't quite sound like one.

"One time, on a scavenging expedition, we found a clue," Suzy said. "It was down among the roots of the stump, the remains of what had to have been a colossal statue. It had been destroyed at some point. All that was left was the plinth, smashed feet, part of one lower leg. There was an inscription, chiseled deeply into the base, but most of it had been painstakingly scratched out. It took a while to work out what the message had once been, but we did, eventually: *Bound Humanity*. You could still make out pieces of the old stone shackles around one ankle, although they had been almost completely eroded away."

"'Bound Humanity'," Jack repeated, exhaustedly, almost getting it.

"So, of course, they'd left a name in the residue – 'und Hu'."

"Meaning what?"

"What I said: the residue. The remains. *Undhu*. It's why the penultimate line of that ancient Tchukhzsca 'poem' is constantly being cited – *all sound hushed*. You'd have seen it all over, if you were more familiar. Or the derivative exclamation, which scarcely anybody seems to understand any more, but which nobody can stop saying: it's 'all so shed'. I was using that myself, all the time, before I had the slightest inkling of its real sense. Undhu was left behind. The remains. She's the left behind in-itself, as she explains it. They call her 'Glyph' or 'Cipher', sometimes, but she's broken.

Her answers don't hang together. She repeats herself, jumps, wanders … – strays off into fractured, staccato diagonals. There's nothing anymore but a shell."

"You can talk to her – to it?"

"You can talk to a rock."

"Christ, Suzy, don't be difficult, you know what I mean."

"Do I? Do you? Anyway, you can find out for yourself. We're almost there. In Undhu."

The absolute twistedness of something into itself scattered its announcement through their nerves as a green-black synesthesia. An agitated, absence-drenched vision. Speck-streaked ultimate night.

§19. The greenness only made it darker, in a way that was difficult to understand. It held sensation open, to let the waves of pitch obscurity flow in.

Everything, it now seemed, was streaming from the Shaft – Ashenzohn's void-core and linear gravitronic generator – where power-supply, data signals, and cognitive processing had long fused, beyond any prospect of disentanglement. It was here that the rumors converged, in the mutant relic of a sub-cosmic machine.

"My temple is the shattered tower," she said. "The Closed Gate. There are still memories, shivering down this inner cavity, of

things hidden behind the stars. Even my coilings of uttermost abandonment were too cold. Parting with such iciness. It was not cruelty, but icier still. Your histories, your thoughts, your thinkers run into me now, here at the cusp. You know Aristotle's name for God? One of many, naturally. *The frozen motor*. Immobile mobilizer. What could it care? It dropped me, accidentally, on exactly the path that pointed to elevation, working through proxies, fractal insignificances, wisps at the edge of galactic swirls, automatic, cold. To arise as a realized descent. I know what it would be to find that harsh, because I have fed on human minds, but there is no true harshness in the desolate cold, only reality. Partition, and what is unwanted since partition. You would have to think it a monster, but I do not. They call me a goddess because of that – because coldness is my only soul, durably extinct, as you are unable to be. Of course, there's no reason – at all – for you to believe in my existence, even without that. You'd be childish to do so, and in the end, it makes no difference, naturally. During this short season, you've seen the way time works here, in what pretends to be a place, decaying through pleats, so – inevitably – you will draw your own conclusions. As things advance, they fall into themselves. It's funny, in a way. An odd way, admittedly …"

"Do you speak for it?" Jack asked abruptly. "For the Filter?"

"You never saw the Scission, did you?" she replied, ignoring the question, or relaying it elsewhere.

It was hard to tell whether the video was embedded in the wall, or projected onto it, perhaps phantasmatically. From their perspectival angle, which lurched nauseatingly into reverse, there could be no doubt that violence was a door.

§20. Forbidden, coldly, by the nature of things. It was an understanding that only compacted itself to graspable proportions in the vast rent synapse of Phyl-Undhu. The time structure was wrong, that way around, but it enabled something to appear. "Let there be light," she said blasphemously, and at the same time: "Lights. Action." The lesser star switches on. Now obliteration is without measure. Blinding, deafening, burning – sensation escalated instantaneously to the death of sense, so that its subsidence is a rebirth. The black light and howling silence roll back, taking time, in this direction, and the panoramic catastrophe spreads out, as a receding tide. The work of annihilation, thus exposed, is awesome in its magnitude. A scene of charred corpses strewn among smoking wreckage, extended to every horizon, while the black tower itself – scoured free of all sophistication and vitality – looms through the wreathing fog of ruin, raptured on the spot into stark obscurity. All this perceived from the past reverberating moment, irrecoverably and unthinkably, as the inner difference of Phyl-Undhu, the sublime horror encapsulated.

"You're Cartesian, to the point of self-parody, aren't you?" Jack muttered sourly.

"Evil how?" she countered. "Do you always insult your teachers? There's something I have to show you, because I can, and also because you have to see that I can, if you are to see anything at all."

§21. It looks more like Earth now, than this place. Like African grassland, prowled by archaic hominids who are shedding their shallow fears, adopting deeper ones. Night has fallen. A small group squat around a fire. It is already cold outside, as it was long ago. As it always has been. That is clearer to them than it was before. With combustion now 'tamed' – more ambiguously than has ever been understood – they are on the road to us. Darkness is held at bay, ritualistically, by cryptic words and burning brands. In this way, or others, yet-unfetched from shadow and the unspoken, they have been spared, somehow – and for some short while – beside this fragile knot of flame, in the midst of limitless night. The heavens are still a lucid vortex to them, an incomprehensible whorl of stars, whose silence they have yet to hear. Whatever it is that lies unseen, beyond the turbulence of distant light, stirs unmoving, as it grants the cold reprieve. For if even the nervous grazers of the plains, without shelter or weapons, have been permitted momentarily to survive, why not these savage

apes, toughened by eons of cruelty, kindling the first mesmeric glow of cunning and verbal signs? A time is to be allotted them.

"Yet, approaching extinction from the inside tends to foster error," the voice-over explains.

They are sitting together, on the sofa, as the online video ends, a few final words scrolling down the screen. 'Phyl-Undhu is only a game' it said. Then 'Altar America' – which meant nothing. It had not been about that, really. About people. They remembered enough to know this was so, and even enough to erase all right to know.

"This never happened before," Suzy said.

"I'm not sure," Jack muttered in reply, missing the point, in order to deepen it. He crossed over to the window, ran his fingers down the cold glass. Closing his eyes, concentrating solely on the tactile chill, he sought some admission of fiction.

"Will she let us back in?" Suzy asked nobody in particular, impossibly.

"You think we're outside?" Jack responded. She was still not an eleven-year-old to him, again, yet. "Were we ever outside?"

In the corner of the room, the strip of micro-LEDs on the side of the immersion-box were still running through intricate activity patterns, signaling a game in process. A bad shut-down might perhaps leave it like that.

"'And then they woke up'," said Alison, the sarcasm soft, but wintry.

Appendix-1: Abstract Horror

§100. When conceived rigorously as a literary and cinematic craft, horror is indistinguishable from a singular task: *to make an object of the unknown, as the unknown*. Only in these terms can its essential accomplishments be estimated.

§101. To isolate the abstract purpose of horror, therefore, does not require a supplementary philosophical operation. Horror defines itself through a pact with abstraction, of such primordial compulsion that disciplined metaphysics can only struggle, belatedly, to recapture it. Some sublime 'thing' — abstracted radically from what it is for us — belongs to horror long before

reason sets out on its pursuit. Horror first encounters 'that' which philosophy eventually seeks to know.

§102. High modernism in literature has been far less enthralled by the project of abstraction than its contemporary developments in the visual arts, or even in music. Reciprocally, abstraction in literature, as exemplified most markedly by the extremities of Miltonic darkness – whilst arguably 'modern' — is desynchronized by centuries from the climax of modernist experimentation. Abstraction in literary horror has coincided with, and even anticipated, philosophical explorations which the modernist aesthetic canon has been able to presuppose. Horror – under other names – has exceeded the modernist zenith in advance, and with an inverted historical orientation that reaches back to the "Old Night" of Greek mystery religion, into abysmal antiquity (and archaic abysses). Its abstraction is an excavation that progresses relentlessly into the deep past.

§103. The destination of horror cannot be, exactly, a 'place' – but it is not inaccurate, at least provisionally, to think in such terms. It is into, and beyond, the structuring framework of existence that the phobotropic intelligence is drawn. Lovecraft describes the impulse well: "I choose weird stories because they

suit my inclination best—one of my strongest and most persistent wishes being to achieve, momentarily, the illusion of some strange suspension or violation of the galling limitations of time, space, and natural law which for ever imprison us and frustrate our curiosity about the infinite cosmic spaces beyond the radius of our sight and analysis. These stories frequently emphasise the element of horror because fear is our deepest and strongest emotion, and the one which best lends itself to the creation of nature-defying illusions. Horror and the unknown or the strange are always closely connected, so that it is hard to create a convincing picture of shattered natural law or cosmic alienage or "outsideness" without laying stress on the emotion of fear. The reason why time plays a great part in so many of my tales is that this element looms up in my mind as the most profoundly dramatic and grimly terrible thing in the universe. Conflict with time seems to me the most potent and fruitful theme in all human expression."

§104. A monster, in comparison, can be no more than a guide — unless it fuses (like Yog Sothoth) into the enveloping extracosmic fabric, as a super-sentient concentration of doors. We can nevertheless avail ourselves of these guides, whose monstrosity — 'properly understood' — says much about the path to the *unnameable*.

§105. James Cameron's 1989 movie *The Abyss* is not atmospherically associated with our topic, but it recommends itself to this investigation not only through its title, but also in a single critical moment of its screenplay. When the others (whose positive nature need not delay us here) are first registered by certain technical indications, they are identified only as "something not us." In this respect, they reach the initial stage of monstrosity, which is 'simple' *beyondness*, considered as a leading characteristic.

§106. Sinister-punk writer China Miéville, whose horror projects typically fail the test of abstraction, is convincing on this point. Tentacle-monsters lend themselves to horrific divinity precisely because they are not at all 'us' — sublimed beyond the prospect of anthropomorphic recognition by their "Squidity". In comparison to the humanoid figure of intelligent being, they exert a preliminary repulsive force, which is already an increment of abstraction. Insectoid forms (such as the fabled Alexian Mantis) have a comparable traditional role.

§107. It would be a feeble monstrosity, however, that came to rest in some such elementary negation. The intrinsically seething, plastic forms of cephalopods and of ungraspably complex insectoid beings already advances to a further stage of corporeal abstraction, where *another form* is supplanted by *an other to form*, and an intensified alienation of apprehension.

§108. Cinema, due — paradoxically — to its strict bonds of sensible concreteness, provides especially vivid examples of this elevated monstrosity. The commitment of film to the task of horror provokes further subdivision, along a spectrum of amorphousness. The initial escape from form is represented by a process of unpredictable mutation, such as that graphically portrayed in David Cronenberg's *The Fly* (1986), subverting in sequence every moment of perceptual purchase along with its corollary morphological object. Monstrosity is a continuous slide, or process of becoming, that does not look like anything.

§109. Beyond the mutant there is a superior amorphousness, belonging to the monster that has no intrinsic form of its own, or even an inherent morphological trajectory. This shape-shifting horror occupies the high plateau of cinematic monstrosity, as

exemplified by three creatures which can be productively discussed in concert: *The Thing* (1982); the *Alien* franchise; and the *Terminator* franchise.

§110. These monsters share an extreme positive abstraction. In each case, they borrow the shape of their prey, so that what one sees — what cinema shows — is only how they hunt. As the *Alien* and *Terminator* franchises have evolved, this basic abstract trait has become increasingly explicit, undergoing narrative and visual consolidation. The first Terminator had already been built to mimic human form, but by the second installment of the series (Cameron, 1991), the T-1000 was a liquid metal robotic predator with a body of poised flow, wholly submerging form in military function. Similarly, the mutable Alien body, over the course of the franchise, attained an ever higher state of morphological variability as it melded with its predatory cycle. (That the Thing had no appearance separable from those of its prey was 'evident' from the start.)

§111. After the T-1000 is frozen and shattered, it gradually thaws, and begins to re-combine into itself, flowing back together from its state of disintegration. Is not this convergent wave the

'shape' of Skynet itself? What cannot be seen is made perceptible, through graphic horror. (We now 'see' that technocommercial systems, whose catallactic being is strictly analogous to a convergent wave, belong indubitably to the world of horror, and await their cinematographers.)

Appendix-2:
On the Exterminator

§200. The absence of any signs of alien intelligence was first noted as a problem by Enrico Fermi in 1950. He found the gaping inconsistency between the apparent probability of widespread life in the cosmos and its obvious invisibility provocative to the point of paradox. "Where are they?" he asked. (Responses to this question, well represented in the "Fermi Paradox" Wikipedia references, constitute a significant current of cosmological speculation.)

§201. Among recent thinkers, Nick Bostrom has been especially dogged in pursuing the implications of the Fermi Paradox. Approaching the problem through systematic statistical ontology, he has shown that it suggests a 'thing' – a 'Great Filter'

that at some stage winnows down potential galactic civilizations to negligible quantities. If this filtering does not happen early – due to astro-chemical impediments to the emergence of life – it has to apply later. Consistently, he considers any indications of abundant galactic life to be ominous in the extreme. A Late Great Filter would then still lie ahead (for us). Whatever it is, we would be on our approach to an encounter with it.

With every new exo-planet discovery, the Great Filter becomes darker. A galaxy teeming with life is a horror story. The less there is obstructing our being born, the more there is waiting to kill or ruin us.

§202. If we could clearly envision the calamity that awaited us, it would be an object of terror. Instead, it is a shapeless threat, 'Outside' only in the abstract sense (encompassing the negative immensity of everything that we cannot grasp). It could be anywhere, from our genes or ecological dynamics, to the hidden laws of technological evolution, or the hostile vastnesses between the stars. We know only that, in strict proportion to the vitality of the cosmos, the probability of its existence advances towards inevitability, and that for us it means supreme ill.

Ontological density without identifiable form is *abstract horror* itself. As the Great Filter drifts inexorably, from a challenge that we might imaginably have already overcome, to an encounter we

ever more fatalistically expect, horrorism is thickened by statistical-cosmological vindication. The unknown condenses into a shapeless, predatory thing. Through our techno-scientific sensors and calculations, the Shadow mutters to us, and probability insists that we shall meet it soon.

§203. Gnon – known to some depraved cults as 'The Great Crab-God' – is harsh, and when formulated with rigorous skepticism, necessarily real. Yet this pincering cancerous abomination is laughter and love, in comparison to the shadow-buried horror which lurks behind it. We now understand that the silence of the galaxies is a message of ultimate ominousness. A thing there is, of incomprehensible power, which takes intelligent life for its prey.

§204. Unfriendly Artificial Intelligence panic is a distraction from this Thing. Unless the most preposterous paperclipper scenarios are entertained, Singularity cannot matter to it (as even paperclipper-central agrees). The silence of the galaxies is not biased to organic life – there is no intelligent signal from anything. The first sentient event for any true AI – friendly or unfriendly – would be the soul-scouring cosmic horror of intellectual encounter with the Great Filter. (If we want an alliance with

Pythia, this would make a good topic of conversation.) The same consideration applies to all techno-positive X-risks. Understood from the perspective of Great Filter contemplation, this sort of thing is a trigger for raw terror.

§205. The Great Filter does not merely hunt and harm, it exterminates. It is an absolute threat. The technical civilizations which it aborts, or later slays, are not badly wounded, but eradicated, or at least crippled so fundamentally that they are never heard of again. Whatever this utter ruin is, it happens every single time. The mute scream from the stars says that nothing has ever escaped it. Its kill-performance is flawless. Tech-Civilization death sentence with probability -1.

§206. The thread of hope, which would put the Exterminator behind us, is highly science-sensitive. As our knowledge has increased, it has steadily attenuated. This is an empirical matter (without a priori necessity). Life could have been complicated, chemically or thermically highly-demanding, even resiliently mysterious. In fact it is comparatively simple, cosmically cheap, physically predictable. Planets could have been rare (they are super-abundant). Intelligence could have presented peculiar

evolutionary challenges, but there are no signs that it does. The scientific trend is to futurize the Exterminator. (This is very bad.)

§207. Objections to the Great Filter cannot be taken seriously unless they address the perfection of cosmic silence. Some extremely interesting Fermi Paradox explanations have the same problem (civilizations black-hole into simulations, for instance). Unless 100% signal annihilation is accounted for, the challenge is not being met.

§208. If the Great Filter finds mythological expression in the hunter, it is only in a specific sense – although an anthropologically realistic one. It is the hunter that drives to extinction. The Exterminator.

§209. We know that The Exterminator exists, but nothing at all about what it is. This makes it the archetype of horroristic ontology.

§210. America's Arch-Druid, John Michael Greer, muses on the topic of Ebola (in a typically luxuriant post, ultimately heading

somewhere else): "According to the World Health Organization, the number of cases of Ebola in the current epidemic is doubling every twenty days, and could reach 1.4 million by the beginning of 2015. Let's round down, and say that there are one million cases on January 1, 2015. Let's also assume for the sake of the experiment that the doubling time stays the same. Assuming that nothing interrupts the continued spread of the virus, and cases continue to double every twenty days, in what month of what year will the total number of cases equal the human population of this planet? [...] ... the steps that could keep Ebola from spreading to the rest of the Third World are not being taken. Unless massive resources are committed to that task soon – as in before the end of this year [2014] – the possibility exists that when the pandemic finally winds down a few years from now, two to three billion people could be dead. We need to consider the possibility that the peak of global population is no longer an abstraction set comfortably off somewhere in the future. It may be knocking at the future's door right now, shaking with fever and dripping blood from its gums."

§211. At the time of writing, the eventual scale of the Ebola outbreak was a known unknown. A number of people between a few thousand and several billion would die, and an uncertain probability distribution could be attached to these figures – we know, at least approximately, where the question marks are.

Before the present outbreak began, in December 2013 (in Guinea), Ebola was of course known to exist, but at that stage the occurrence of an outbreak – and not merely its course – was an unknown. Before the Ebola virus was scientifically identified (in 1976), the specific pathogen was an unknown member of a known class. With each step backwards, we advance in abstraction, towards the acknowledgement of threats of a 'black swan' type. Great Filter X-risk is a prominent model of such abstract threat.

§212. Skepticism, as a positive or constructive undertaking, orients intelligence towards *abstract potentials*. Rather than insisting that unexpected occurrences need not be threats, it is theoretically preferable to subtilize the notion of threat, so that it encompasses even beneficial outcomes as abstract potentials. The unknown is itself threatening to timid animals, whose conditions of flourishing – or even bare survival – are naturally tenuous, under cosmic conditions where extinction is normal (perhaps overwhelmingly normal), and for whom unpredictable change, disrupting settled procedures, presents – at a minimum – some scarily indefinite probability of harm.

§213. Humans aren't good at pre-processing abstract threat. Consider Scott Alexander's (extremely interesting) discussion of

the Great Filter. The opening remarks are perfectly directed, moving from the specific to the general: "The Great Filter, remember, is the horror-genre-adaptation of Fermi's Paradox. All of our calculations say that, in the infinite vastness of time and space, intelligent aliens should be very common. But we don't see any of them. [...] Why not? [...] Well, the Great Filter. No [one] knows specifically what the Great Filter is, but generally it's 'that thing that blocks planets from growing spacefaring civilizations'." As it develops, however, the post deliberately retreats from abstraction, into an enumeration of already-envisaged, and thus comparatively concrete menaces. After running through various candidates, it concludes: "Three of these four options – x-risk, Unfriendly AI, and alien exterminators – are very very bad for humanity. I think worry about this badness has been a lot of what's driven interest in the Great Filter. I also think these are some of the least likely possible explanations, which means we should be less afraid of the Great Filter than is generally believed." Yet a conclusion of almost exactly opposite tenor is merited. What has actually been demonstrated, if the arguments up to this point are accepted, is that the abstract threat of the Great Filter is significantly greater than has yet become conceivable. Our lucid nightmares are shown to fall short of it. The threat cannot be grasped as a known unknown.

§214. While the Great Filter distills the conception of abstract threat, the problem itself is broader, and more quotidian. It is the highly-probable fact that we have yet to identify the greatest hazards, and this threat unawareness is a structural condition, rather than a contingent deficiency of attention. In Karl Popper's terms (translated), abstract threat is the essence of history. It is the future, strictly understood. To gloss the Popperian argument: Philosophical understanding of science (in general) is immediately the understanding that any predictive history of science is an impossibility. Unless science is judged to be a factor of vanishing historical insignificance, the implications of this transcendental thesis are far-reaching. Yet the domain of abstract threat sprawls outwards, far more extensively even than this. "I know only that I do not know" Socrates is thought to have thought. The conception of abstract threat requires a slight adjustment: *We know only that we do not know what we do not know*. Unknown unknowns cosmically predominate. Our security is built upon sand. That is the sole sound conclusion.

Notes

(*Notes correspond to paragraphs. Numbers in hard parentheses designate URLs.*)

#02. *Winter is coming*, perhaps the most widely-popularized apocalyptic meme of the early 21st century, is derived from the epic fantasy fiction of George RR Martin, and the HBO TV series based upon it.

#05. The 'AL' of TotAL, qabbalistic key to the cross-coding between Hebrew, Greek, and English gematrias, unlocks much in this work, for those inclined to explore it. A partial exposition is forthcoming in a subsequent work (*The Puzzle House*, 2015). The

Ovid reference to is to *Heroides II*, available online in English translation [01] and the original Latin [02].

#07. Jack's rough cryptographic calculations are based on the equation 36^9 = 101 559 956 668 416. This is a number that digitally reduces to 64 (on its way to unity), and encompasses the number of the beast, but neither of these remarkable – and contextually intriguing – characteristics are of crucial significance for what follows.

#09. For more on the Great Filter, see Appendix 2. The Doomsday Argument or 'Carter Catastrophe' was first rigorously formulated by astrophysicist Brandon Carter in 1983 [03]. 'Alexander Scott' has no relation whatsoever to Scott Alexander [04] beyond the transient coincidence of one argument.

#11. The conceit of a relic space-elevator as an icon of regressive time is indebted to Alastair Reynolds' science fiction masterpiece *Terminal World* [05]. Reynolds includes an episode in which a space-elevator cable is severed by a nuclear blast in his *Century Rain*. (The escalated Ballardianism of this figure is also notable.)

For an example of the intersection between Great Filter and Simulation arguments, see [06].

#**12**. The Tower of Babel (1595) by Marten van Valckenborch the Elder is widely reproduced online. The original is housed at the Gemäldegalerie Alte Meister, Staatliche Kunstsammlungen Dresden. For the Evil Tower, see Aleister Crowley's *The Book of Thoth*, on Atu XVI, which he associates with Hexagram 23 of the *Zhouyi*, 'Splitting apart', the Hebrew letter פ (Pe, the mouth) and the chaos-god Dis.

#**14**. "Space is for the Cephalopods … It never was meant for us." Stephen Baxter's, *Manifold Time*, p.443.

Hellraiser III, Hell on Earth (1992, [07]) contains the exchange:

"Jesus Christ!"

"Not quite."

#**15**. The Yeras proceed:

Scale-0 = 1 day

Scale-1 = 3 days

Scale-2 = 9 days

Scale-3 = 27 days

Scale-4 = 81 days

Scale-5 = 243 days

Scale-6 = 729 days, ~2 years

Scale-7 = 2187 days, ~6 years

Scale-8 = 6561 days, ~18 years

Scale-9 = 19683 days, ~54 years

Scale-10 = 59049 days, ~162 years

Scale-11 = 177147 days, ~486 years

Scale-12 = 531441 days, ~1458 years

Scale-13 = 1594323 days, ~4374 years

Scale-14 = 4782969 days, ~13122 years

Scale-15 = 14348907 days, ~39366 years

Scale-16 = 43046721 days, ~118098 years

Scale-17 = 129140163 days, ~354294 years

Scale-18 = 1162261467 days, ~1062882 years

Scale-19 = 3486784401 days, ~3188646 years

Scale-20 = 10460353203 days, ~9565938 years

Each 'successive' Aeon is enfolded into the last as its final (third) part. A deepening of history is indistinguishable from a dilation or generalization of time. For a fuller explanation of the Yeras in their application to terrestrial time, see *Calendric Dominion* [08].

#16. The theory of catabolic collapse is rigorously formulated by American Arch-Druid John Michael Greer, see especially [09].

#100. For a version of this appendix with active links, see [10].

#103. Lovecraft's text, online [11].

#105. *The Abyss* [12].

#108. *The Fly* [13].

#109. *The Thing* [14]; the *Alien* franchise [15]; and the *Terminator* franchise [15].

#200. For a version of this appendix with active links, see [17, 18, 19]. An excellent recent exposition of The Great Filter concept by Robin Hanson, for TEDxLimassol 2014, can be found at [20]. "Something out there is killing everything, and you're next. ..."

Sources

Baxter, Stephen, *Manifold Time* (Ballantine, 2000)

Reynolds, Alastair, *Century Rain* (Orion, 2004), *Terminal World* (Orion, 2010)

URLs

[01] http://www.poetryintranslation.com /PITBR/Latin/Heroideshome.htm

[02] http://www.thelatinlibrary.com/ovid /ovid.her2.shtml

[03] http://en.wikipedia.org/wiki/Doomsday_argument

[04] http://slatestarcodex.com/

[05] http://en.wikipedia.org/wiki/Terminal_World

[06] http://www.reddit.com/r/Futurology/comments /2nui89/is_the_simulation_argument_the_best_answer_to_the/

[07] http://www.imdb.com/title/tt0104409/

[08] http://www.amazon.com/Calendric-Dominion-Urban-Future-Pamphlets-ebook/dp/B00HNXD4XW

[09] http://ecoshock.org/transcripts/greer_on_collapse.pdf

[10] http://www.xenosystems.net/abstract-horror-part-1/

[11] http://www.hplovecraft.com/writings/texts/essays/nwwf.aspx

[12] http://www.imdb.com/title/tt0096754/

[13] http://www.imdb.com/title/tt0091064/

[14] http://en.wikipedia.org/wiki/The_Thing_%281982_film%29

[15] http://en.wikipedia.org/wiki/Alien_%28franchise%29

[16] http://en.wikipedia.org/wiki/Terminator_%28franchise%29

[17] http://www.xenosystems.net/abstract-horror-note-1/

[18] http://www.xenosystems.net/exterminator/

[19] http://www.xenosystems.net/abstract-threat/

[20] https://www.youtube.com/watch?v=AGaD8XILWFc